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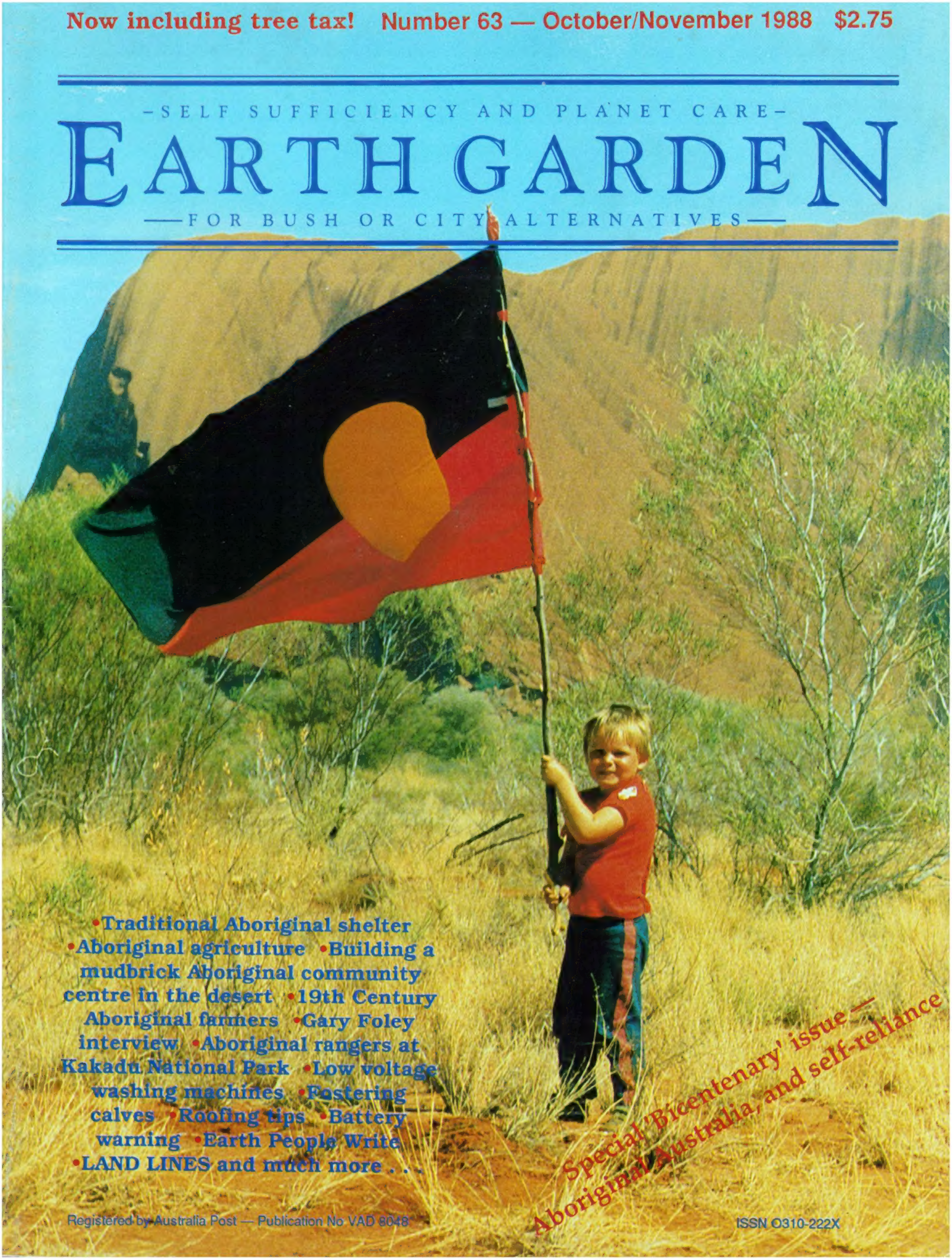
-SELF SUFFICIENCY AND PLANET CARE-

EARTH GARDEN

—FOR BUSH OR CITY ALTERNATIVES—



- Traditional Aboriginal shelter
- Aboriginal agriculture
- Building a mudbrick Aboriginal community centre in the desert
- 19th Century Aboriginal farmers
- Gary Foley interview
- Aboriginal rangers at Kakadu National Park
- Low voltage washing machines
- Fostering calves
- Roofing tips
- Battery warning
- Earth People Write
- LAND LINES and much more . . .

Special 'Bicentenary' issue — Aboriginal Australia, and self-reliance

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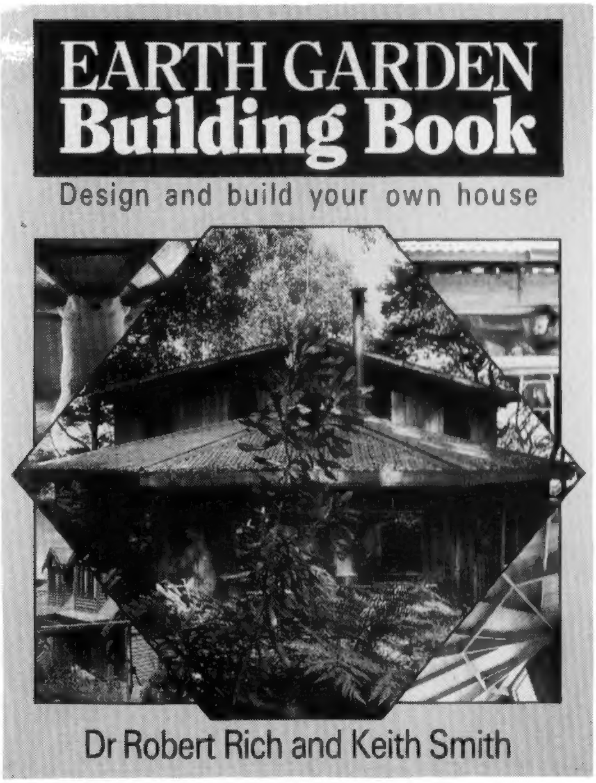
ISSN 0310-222X

EARTH GARDEN BOOKS


EARTH GARDEN
Building Book
Design and build your own house
Dr Robert Rich and Keith Smith

EARTH GARDEN BUILDING BOOK

Design and build your own house

Dr Robert Rich and Keith Smith

Nelson, 1987, 315 pages, illustrated, large format paperback.

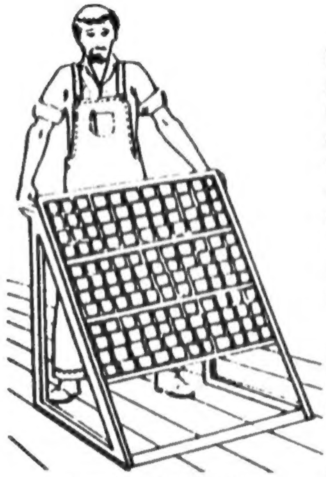
This is the book many people have been waiting for since they first dreamt of building their own home from natural materials in harmony with their surroundings. It answers all the questions for Australian owner-builders. It's a 'practical book for dreamers' and it faces the difficult subjects square on. What the authors have done is show how anyone of average intelligence and reasonable health can build their own home, and probably not end up with a 25 year mortgage at the end of it all.

"This book is intended to provide an antidote to the stereotyped Australian suburban sprawl of red brick houses with red tile roofs, set squarely in a rectangle of ground," said authors Bob Rich, and former Earth Garden publisher and editor, Keith Smith.

AT LAST! EG BINDERS TO PROTECT YOUR COLLECTION

These sturdy magazine binders have recently been produced to protect your collection of back issues. Each binder snugly holds 12 copies of Earth Garden, and prevents tears, dog ears and bent pages. The binders are made from a tough, 'deer-hide tan' vinyl, with the Earth Garden name and logo stamped in gold foil on the cover and spine.

Order form on page 56



ENERGY WORKS!

Home Energy Systems

By Keith Smith

Nelson, Melbourne, 1985, large format paperback, 211 pages, illustrated. ☐ $19.95 posted.

Why spend the rest of your life paying someone else for your electricity? Here's how to plug in the renewable energy of the sun, wind or water using an efficient 12V or 240V solar electric system, wind generator or water turbine. Run lights, radio, TV, computers, tools and appliances wherever you live.

"The major part of this book is devoted to practical issues, hardware and actual installations.

". . . This book should appeal to anyone wth an interest in the supply of energy to weekenders, farms or other remote dwellings or even to the suburban household." — Dr C. J. L. Cornish of Murdoch University, WA, in *APACE WA Newletter*.

HARD TIMES HANDBOOK

Survive — and thrive!

Keith & Irene Smith

Nelson, 1986, 204 pages, 70 illustrations. ☐

This is the second, corrected edition of our practical book of skills, strategies and short-cuts for urban survival. HARD TIMES HANDBOOK outlines a new, self-reliant approach to city living. It tells you how to do more with less, be prepared for food shortages and emergencies, save energy, make money without a job and manage your food supply. Make bread, yoghurt, soft cheese, candles and soap. There are 150 recipes for cheap, healthy tucker and 180 money-saving household hints.

—SELF SUFFICIENCY AND PLANET CARE—

EARTH GARDEN

—FOR BUSH OR CITY ALTERNATIVES—

Number 63 — October/November 1988

Cover photo: Mingara Clarke (good spirit who controls the weather) is a sixth generation member of the Clarke family from Victoria's Framlingham Aboriginal community.

•This issue's tree tax will go to the Penan tribal people of Malaysia, who are fighting the destruction of their traditional rainforest land by the Malaysian Government.

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Founded by Keith & Irene Smith, 1972.

EARTH GARDEN is Australia's original journal of self-sufficiency and alternatives. It is intended as a forum of practical ideas, shared knowledge, sources and to point towards alternatives to unfulfilling consumerist lifestyles.

It's about putting a roof over your head, growing your own food, using alternative energy systems, and surviving — and thriving in the city or the bush, with the inner changes which follow when you're in tune with Nature.

Published and edited by Camille and Alan Thomas.

Book Review Editor: Sophie Masson.

Illustrations by Bronwyn Halls.

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Contributions to EARTH GARDEN are welcome — sharing information and experiences with other readers strengthens the network of Earth Gardeners.

Photos, illustrations and diagrams are important when sending us contributions.

Subscribers are sustainers — for subscription details see page 56.

We welcome advertisements appropriate to the aims and ideals of EARTH GARDEN, but reserve the right to refuse ads at our discretion. Write to us for display rates.

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Dear readers,

Welcome to the October issue of Earth Garden. This month we've hit the streets one or two days earlier than usual, and we hope to continue arriving earlier in the future. This year we've failed miserably in our aim to bring Earth Garden's publication date back to the previous month of issue. The reasons are many, but include all our dramas, traumas and exhaustions of building our house on our bush block and coping with all the legal hassles associated with it.

The reason we'll be getting better now is that we have two new people to help us produce Earth Garden. Deborah and Gai are helping us part-time and it's made an enormous difference to our efficiency, and stress levels! Gai lives on a farm about 20 minutes from our place with her menagerie of chooks and farm animals and helps us with processing book and back issue orders. Deborah lives with her family at Woodend and helps us with all the office jobs we can dream up to dump in her lap. We're a real hive of activity tucked away in the bush now. There's nothing more pleasant than finding a spare seat in the office to join in the activity while glancing out the windows at the chooks scratching in the yard, and the calm of our beautiful eucalypt forest of stringybarks, peppermints, blackwoods and candlebarks.

Tane loves living here in the bush and delights in cuddling the chooks every morning, alternating between saying: "You lazy girls!", if they haven't laid any eggs, and: "Look, Dad, Henny-Penny laid a googy-egg today!" if they've been busy.

The most noticeable feature of this issue is that this a special edition devoted to aspects of Aboriginal Australia. Camille and I (Alan) both feel very strongly about the way Aboriginal people are treated in their own country, both over the past 200 years, and right up to the current day. As people interested in treading more gently on the Earth, and using her resources more wisely, we all have much to learn from the rich lifestyles of Aboriginal people.

We have articles on traditional Aboriginal cultures, as well as modern day subjects such as the Kalka mudbrick community centre and the interview with Gary Foley. Six months ago I was driving through Gertrude Street, in Fitzroy, Melbourne, and it was just after I had read the talking history interview with Gary Foley in *Land Rights News*. I saw him standing outside the Aboriginal community building, so I parked my car and went over to have a word. I shook his hand and told him that I have a lot of admiration for the way he has fought for his people over the past 20 years (I sometimes get these terrible urges to do such embarrassing things to myself and other people!). Gary looked slightly embarrassed too, and it was rather a strange exchange in retrospect, but I suppose it shows how strongly I feel about the way Aboriginal people have had to struggle to gain a measure of equality in their own land.

We wanted to run a special issue this year on Aboriginal Australia partly because we believe that we all have a lot to learn from Aboriginal people, but mostly it's because this year we've been horrified at the way Aboriginal people have been snubbed by the gaudy nationalism and racism associated with the Bicentenary celebrations. So this is a 'special Bicentenary issue' of Earth Garden, but not in the way that phrase has been bandied about for all sorts of commercial products this year.

We thought that our conservative politicians of all persuasions would at least have had the morality to acknowledge the wrongs of the past and present, and sign a treaty with Aboriginal people and their representatives. This small token would have been at least a grain of balance to pit against the mountain of oppression. But no, they couldn't even organise that. The Barunga Statement on page 15 is an example of the sort of agreement that should be enshrined in the Constitution. A Constitution, derived from British law, which is based on the premise that Australia was *Terra Nullus* (empty land) when invaded by Captain Cook. Cook was under strict instructions from the British Admiralty to "take possession of the land with the consent of the natives" *(sic).*

One of the wonderfully dignified aspects of the Aboriginal struggle today is the fact that Aboriginal people generally are looking to the future, not the past, and are prepared to live in harmony with white Australians. I think our cover photograph this month symbolises this look to the future. We are grateful to Jeff Clarke (Mingara is his son) and the Victorian Framlingham Aboriginal Community, near Warrnambool, for permission to reproduce the front cover photograph from their 1988 'We Have Survived' calendar. This calendar is a fascinating history of the struggles of the Kirrae Whurrong (Framlingham) Aboriginal community since Europeans 'settled' Victoria's Western District in the 19th Century. Although it deals with the Kirrae Whurrong people it closely reflects the struggles of all Australian Aborigines, and is available for $15 from Jeff Clarke, Administrator, Framlingham Aboriginal Trust, C/- Purnim Post Office, Victoria, 3270.

One last point: the British excuse for taking possession of Australia was based on the *Terra Nullus* proposition, based in British law, that if a land is under cultivation or there are permanent dwellings, then representatives of the Crown were required to negotiate a treaty with the local land owners, and respect local laws (as happened with the Maori people in New Zealand). Articles on housing and agriculture by John Archer, one of Australia's foremost authorities on earth building, and Jackie French, in this issue clearly show what a tradition of deception has been taught throughout Australia's white history.

On a lighter note, we are pleased to be able to give your some advance warning of some very interesting books which will be published later this year (printers permitting). Jackie French has a number of books being released at the moment and there are details at the end of her Season by Season column on pages 49 and 52.

The other book news is that Earth Garden will be publishing a book entitled 'The Healthy House Cow' later this year. We hope to have it on sale in the December issue, when we will have a final price etc. The book has been written by one of Earth Garden's regular contributors, Marja Fitzgerald from northern New South Wales, and covers every aspect of keeping a house cow, from fencing, and pasture, to cheese-making and, of course, milking. Marja has written this book in a friendly, informative style, and naturally, has taken an organic and holistic approach to keeping house cows — something which no other Australian cow books have so far managed. In fact, Australia has very few good books written specifically for people interested in keeping house cows. That is one reason we decided to publish the book; another is that Camille used to be a 'dairy maid' on a number of dairy farms in Tasmania and she absolutely loves dairy cows!

Happy reading,

Camille & Alan

Earth People Write

Letters to Earth Garden are always very welcome.

Ant deterrent

Dear Earth Garden,

I am writing in response to the plea from James L Ledder (EG 60) for a deterrent for ants. In my copy of *Companion Planting* (Little/Gilroy, published by Reed), Brenda Little says:

"Ants won't go near plants which have bone-meal sprinkled around them. Ants steer away from plants which are protected by sawn-off plastic milk cartons. Ants hate the scents given off by Tansy, Penny Royal and Southernwood. A patch of these pleasant, pungent plants by the back door will prevent ants from crossing the threshold. Sprays of these herbs, either fresh or dried, placed on larder shelves will make ants who have got in beat a hasty exit.

If you become exasperated enough to feel murderous, spray the rest with pyrethrum or garlic laced with white pepper. Any nip you may get during the operation can be taken as rough justice exacted for the fact that a good job of aerating the soil was being done before you interfered."

I hope this may help any Earth Gardeners with ant trouble, as the advice in Brenda's book has proved useful and very worthwhile to me. Best wishes **Margaret Murray, Castlemaine, Victoria.**

New organic group

Dear Camille & Alan,

I'm writing on behalf of our newly formed organic group. Many of our members are avid readers of your magazine. I'm writing in response to you publishing a list of organic Associations in June/July 1988 issue. We wish to advise you of the formation of our group. We have only been in existence since March this year and would really appreciate it if you were able to publish our name and address and add it to your list of Associations. Thank you again, **Mountain District Organic Farming & Gardening Association, C/- Trudi Murray, 8 Windermere Drive, Ferntree Gully, Victoria, 3156.**

Great to see another bioregional organic group flourishing.

Innisfail Earth Gardeners

Dear Editor,

My man, baby and I have just moved to Queensland. We'd love to hear from other alternative/spiritually minded people in a 50 km radius of Innisfail (near Cairns). We plan to set up a permaculture farm here. Would love some contacts. Thanks Earth Garden: we love your magazine. Yours sincerely,

The Pittman's, 4/61 Rankin Street, Innisfail, Queensland, 4860.

Helpful advice would be nice

Dear Camille & Alan,

It's been quite a while since I've bought a copy of EG but on reading EG 61, I was pleased to read that you are moving to the country. I'd like to wish you all the best. Lucky buggers!! I'm a 24 year old living in Brunswick, Melbourne, working with adults with intellectual disabilities which I enjoy immensely.

I'm not a greenie or a vegie or a herbalist or into self-sufficiency (no offence intended to the above). I'm just a regular girl frustrated at being trapped in this crazy society we live in, wondering how life got to be *so* complicated.

Like you and probably many others, I'd love to leave this rat race and now after reading EG again, I feel so inspired. Over 10 years ago my parents got hold of some land in the bush up Castlemaine way. They built a fab house for about $6,000 using mostly secondhand materials.

At the time, being about 13, I hated living there. No electricity, little water, no television and no boys. You can imagine my plight! But *now* it's the only place I want to be. Anyway, Bob and Joan (Dad and Mum) sold up and are now in Tasmania, but they still pay the rates on a bit of land up there and have said to us kids that whoever wants it can have it.

In my 'rehabilitation' after a recent marriage break-up I've tried to re-evaluate what I want out of life. It has always been my ultimate goal for my partner and I to work hard in Melbourne for a couple of years, earn enough money to be able to build a mud house on the block and never have to work full-time again. To then be able to spend all our time with the kids (??), dogs, chooks, vegies and other fulfilling ventures.

It has depressed me to think that this wouldn't be possible but I've now realised that just because I don't have a partner doesn't mean I can't work towards that goal.

So here I am, highly determined that I will build my house. My family and friends are super supportive. Bob has offered to send me all the timber I need from his bush block in Tassie. I've got three brothers, two uncles and heaps of friends to help me with the labour but, I know nothing about mudbricks or building!

I think I'll order some back issues of EG, but would really love any ideas and advice from readers. Hope I can do it!

Annie Lorenzetto, 11a Crook Street, Brunswick, Victoria, 3056.

Taking notice of our wishes

Dear Alan & Camille,

It is very sad to read such articles as "A Needless Train Disaster" and "Undermining our Rights" in EG 60 and also Barbara Salter's letter in EG 61 "Mining Acts of Vandalism". No matter how angry we get nor how many letters and petitions we write and sign, very little notice is taken of us.

On the Sunshine Coast, we too have goldminers carrying out their destructive, non-tax paying business. Now toll roads are being proposed which could set an extremely dangerous precedent should they materialise. Most of us already pay around 25 cents tax for every litre of petrol we buy as well as high registration fees, yet still the politicians ask for more.

'Citizens Referendum' provides a means of halting unjust legislation and even for repealing such Acts as PVR, mining laws and reducing taxes to more acceptable levels. Citizens Referendum has worked successfully for over 100 years in Switzerland and is now working equally successfully in Italy, Austria and 23 States of the USA. Citizens Referendum is so effective because it is totally without any party or political affiliations and cannot be manipulated by multinationals or by business.

Exactly what is Citizens Referendum? It is the right of the people to hold a public referendum on any issue or law that three percent (precise proportion yet to be decided for Australia) of the population have signed petitions opposing. If the majority of the people subsequently vote to reject the disputed law, then it is thrown out. Thus Citizens Referendum is truly democratic in that it reflects the wishes of the majority.

Under present legislation, only the Government can say when a referendum is to be held and on what issues. Needless to say, Citizens Referendum has already been rejected by the Senate. So how on earth do we get it? By electing independent candidates who undertake a legally binding agreement to introduce and support a Bill for Citizens Referendum. Citizens Electoral Councils are even now being set up on the Sunshine Coast and are receiving tremendous support.

So if you believe in safe guarding your rights to live on your own land in your own country and enjoy the benefits of your own hard work, then please attend and support any meetings in your area about Citizens Referendum. Or consider holding one.

Quite seriously, it may be the only chance you may ever have. Professor Geoffrey Walker, Head of the Law Department at Queensland University, has made an excellent video, and also cassette tapes, explaining Citizens Referendum. These are available from me for $25 and $3 respectively, posted. A broadsheet explaining Citizens Referendum is available for 10 cents provided you send a long SAE.

Dennis Stanbridge, Post Office Box 139, Noosa Heads, 4567.

Chewing the fat

Dear Camille and Alan,

I have lived for 39 years in Australia and never seen a chestnut in the marketplace. Do you know if they will not grow in Australia for some reason or other? In case you don't know ... they are a European nut. A whole hillside covered with mature chestnut trees in the forest of Dean was cut down early in the Second World War for its timber, much to our chagrin as it denied us a feed of nuts.

I have seen chestnuts for sale in Portugal so presumably they would grow in a Mediterranean climate, but there is a big difference in timber between trees grown in Portugal and those grown in England. England's oldest non-aggression treaty was with Portugal. The reason was that the Yew tree, from which the English long bow was made, is a springy wood when grown in the Portuguese climate but loses its springyness in England's damp climate. So to ensure a supply of bow staves the English signed there a non-aggression: one of the few they have kept!

I do not know whether to be glad or sorry to read the article in EG 62 "Whatever happened to Taste?". I thought I was alone in my lack of taste and that it was due to repeated colds in the head. Although I noticed home grown, when available, did taste better. I remember reading somewhere a long time ago that the world's agriculturalists would one day be sorry for concentrating on so few varieties of plants because eventually pests would become too prevalent and they would no longer have other varieties with resistance because no one would have any seed left.

I have made my own shirts for years — it is the only way you can get one with a tail long enough to tuck in your trousers without the risk of it working its way out again.

I was interested to read of the dimensions of the African 'tukul' — I thought those huts were bigger . . . and I have sent away for a 'Brisbane Book' . . . all in all a very interesting issue; keep up the good work.

I made enquiries at the Brisbane Agricultural Show and was told by the man at the Piscatorial Display (most aquarium fish) that the best fish for farm dams was the Spangled Perch. He had some small ones on display but told me they grow to be about 18 inches, eat just about anything, including each other, and are a very tasty pan fish. So now I know which one to concentrate on. Yellow Bellies, Tilapia and Carp all seem to have some drawback. All for now, love to you and a balloon for the baby. Yours truly,

John Guest, West End, Queensland.

Life's simple pleasures

Dear Earth Garden Readers,

We discovered EG in 1986 on

our around Australia trip and were immediately impressed. Since arriving home we found ourselves longing for wide open spaces (after one year on the road) and after much searching found a beautiful block of 43 acres in the bush at Budgong, near Kangaroo Valley. We have a great log and iron cabin, fuel stove, kero frig and fire place — all living is done in one room! An outside loo, running creek, solitude and peace, what more could anyone ask for?

Perhaps we need to all get back to basics, slow down the pace of our lifestyle, simplify our needs and wants and remember how fortunate we all are in Australia.

We find every EG issue helpful and entertaining in many ways. Thank you. Our greatest delight is the native life we see on our own land — wombats, platypus, goannas, wallabies and wonderful birds. I wish everyone had such a marvellous opportunity as we do.

Colin and Margaret Prior, "Wombat Vale", Budgong.

Unpacking!

Dear Camille & Alan,

I am writing to inform you of our change of address from Melbourne to Townsville.

As long-time subscribers to Earth Garden we'd like to thank you for the fine magazine you are compiling; an inspiration as always. We're looking forward to unearthing our EGs from their packing case as there is so much in them on growing tropical fruit, now very relevant to us.

We're so pleased that EG is doing so deservedly well.

With best wishes,

Christine & Bill Pearse, Townsville, Queensland.

Dear EG,

Have made the big move to my own weed haven and Mum is making rude noises about trying to re-direct magazines. Very pleasant out here away from traffic and people — maybe I was meant to be a hermit. Not enough hours in a day, but I don't suffer from boredom. Thank you for a top magazine. All the best,

Ross, Dalby, Queensland.

Herbal remedies

Dear Alan & Camille,

I'm a newcomer to Earth Garden and likewise to herbs. I haven't tried the remedies below so can't swear to their efficiency. My reference is *The World of Herbs*, Mitchell and Lynch, Macmillan Australia, 1985.

For Keith Hughe's problem with rats the following may help: peppermint, catnip and lavender oils in the cupboards and wherever the beasties go. Buy the oils from a good health food shop or you're liable to be saddled with expensive, synthetic rubbish which doesn't work anyway. If catnip oil is unobtainable plant catnip *inside* not out. Catnip attracts cats and nobody, least of all Jill Redwood, likes a feral cat! If there are any valerian plants anywhere, reef 'em out: rats are rather fond of valerian.

For anyone having trouble with snails a plant called *Ambrosia Maritima* is well worth combing the earth for. A leaf infusion of one part to one thousand of water will kill all snails and apparently it's harmless to fish, livestock and us. It even matures during summer — the peak of snail mating.

This snail tip comes to you from *Green Pharmacy*, Barbara Griggs, Robert Hale, London, 1981. A good book about the history of herbal medicine featuring conventional medicine as the Big Bad Wolf. Unfortunately it doesn't say how one obtains *Ambrosia Maritima.*

Also, how do I get hold of the *Earth Garden Herbal*? And can anyone tell this ignoramus how to keep one dairy cow? What do you feed it? When do you milk it and so on? Yours sincerely,

Kathy Yates,53 Wallace Street, West Wallsend, New South Wales, 2286.

Dear Kathy,

Unfortunately the Earth Garden Herbal *is out of print and your only real hope is finding it in a library.*

Your query about how to keep a house cow is timely, because, if we have no unforeseen delays (haa-haa), later this year Earth Garden will be publishing The Healthy House Cow. *This will be a readable and comprehensive guide to house cow keeping from an organic, Earth Garden point of view.*

There is very little in the way of Australian house cow books and we expect this book to be very popular. It has been written in a very friendly, entertaining and informative style by a long time cow-lover and Earth Garden reader and contributor, Marja Fitzgerald. Marja has been contributing to Earth Garden for many years and has a wealth of experience to draw on. The book covers everything from fencing and pasture to making cheese and other dairy products. We hope to have it available in December (fingers crossed) and there is information elsewhere in this issue about the book.

—Camille and Alan.

East Gippsland Organic Summer School

Dear Camille and Alan,

I am writing to let you know that the East Gippsland Organic Summer School will again be held over the Australia Day weekend in January 1989.

As in past years, the three-day program will include talks by an interesting range of speakers on topics related to organic farming and gardening, as well as workshops and group discussions and a tour of a local organic farm.

About 240 people attended last year's school, and the participants showed a keen interest in all the topics discussed, with enthusiasm increasing during the three days. Quite a few new members were attracted to our Association, and some of the people who attended have since established groups in their areas.

We had a lot of feed-back after the school, and to quote one letter, "We found the speakers stimulating and thought-provoking and appreciated the stringent effort to keep to the timetable as printed on the program. The food was magnificent. The atmosphere at the Summer School was wonderful — friendly, relaxed and a feeling of mutual trust. It was great to meet all the other participants who covered such a wide range of lifestyles and beliefs but who share our desire to live on this planet as harmoniously and organically as possible".

The Summer School will again be held at Camp Coorong, on the shores of Lake Victoria, near Bairnsdale. Camping facilities are good, with plenty of un-powered campsites.

Although this may seem to be an early advice, it is often necessary for people who need to travel long distances to plan ahead. We will be providing more detailed information during the next few months and people may write to me, C/- East Gippsland Organic Agriculture Association, Box 33, Wiseleigh, Victoria,3885, or phone (051) 575 210. With best wishes,

Audrey Porter, East Gippsland Organic Agriculture Association.

Wanting to make contact on a big travel south

Dear Earth Garden,

We're a couple of ex-yanks who've been here in Australia since May. We were very much into self-sufficient alternatives back home but eventually we decided that we must not participate in the insanity of nuclear arms and power plants in order to make peace with ourselves. Because of these values we were delighted to stumble across several back issues of Earth Garden at the local library. We've especially enjoyed the letters from subscribers who've shared their own experiences on the path to self-sufficiency. It's been a tremendous comfort to discover that there are so many here who share our values.

In November and December we will be travelling from Cairns, south to Adelaide. If there are any EG readers along the way who wouldn't mind showing us firsthand their methods and plans it would be greatly appreciated. We will be camping and would enjoy helping with any building, gardening or household chores.

We can be contacted by a note sent to: Lance and Pam Bergman, C/- Post Office, Edgehill, Queensland, 4870. Please enclose your phone number if you would like us to contact you prior to dropping by, also enclose any driving directions from Highway One, that you feel are necessary. Sincerely,

Lance and Pam Bergman, Edgehill, Queensland, 4870.

Searching for saffron

Dear Alan & Camille,

For sometime now, I have been searching for some *Crocus Sativus* bulbs. Please, if anyone has any for sale, or knows who has, contact me. I am prepared to pay for them. I want them so I can have my own supply of Saffron spice. Thanks for a great magazine. Best wishes,

Jane Buchanan,46 Summerfield Road, Serpentine, Western Australia, 6205.

Environmentally-sound products in NT

Dear Camille, Alan and Readers,

I am the Shop Co-ordinator of The Green Turtle, which is the shop of the Environment Centre, Northern Territory, Incorporated. Currently the shop stocks such items as posters, books, cards and T-shirts which are sold to raise funds for the conservation work done by the Environment Centre. However, I am very keen to extend the range of items which make it easier for people to use environmentally sound products.

Such items could be: environmentally sound household cleansers, dye-free toilet paper, soaps, bells for domestic pets to warn wildlife, 'hawk' kites for vegetable patches and so on.

I'm sure many Earth Garden readers know of or are already using such products. I would appreciate it if you could write and tell me about them. Please include the supplier's name and address if possible. Thank you,

Lorraine Hawes, Shop Co-ordinator, Environment Centre NT Inc, PO Box 2120, Darwin, NT, 0801.

Effective and cheap tree guards

Earth Garden Editors,

In the August-September issue of your magazine there was an article regarding tree protection against the predators and elements.

One method we have found to be effective when planting out new trees, especially those we got from the Department of Forest and Lands, is to plant them in a milk carton set in the ground. You cut the bottom out of the carton, and set it in the ground around the new tree. This helps protect if from rabbits and, in our area, strong winds.

It also enables the watering to go directly to the roots in summer time. We first noticed this in roadside plantings by a local shire council. Regards,

R & J Lake, Maldon, Victoria.

Advice from the heart

Dear Alan and Camille,

We have been readers of Earth Garden for some years and enjoy the contributions of your many readers. Perhaps it is now time for us to put the pen to paper. Although our final dream of our home is yet to be realised, we are well on the way. In the beginning the future seemed a haze of consumer living. The method of escape will vary with each person. However, it is important to understand just what it is that you are escaping. Once this aspect is understood, the rest is downhill, although, like us, it may take time, and along the way you will begin to enjoy this life.

To state that the world seems intent on rushing headlong into the future is well documented. The driving force not so well known or acknowledged . . . is greed. To get and to keep on getting. In order to gain the money required to maintain all this getting and accumulating, some have to be enslaved with the promise that if you stick with the pack your turn will come to reap your share. This is reinforced through the mass media and peer groups.

Not only do some of us get caught up in this mad rush, we actually go into debt to 'enjoy' our slavery. I was right in there with them. Then, at the time I was approaching 40, I crashed. After the family left, the house (with pool and bar) sold, the boat (my ex-wife got the car) the other block of land sold, I was left with no job and still owed $12,000. If this was the result of modern living why did I feel so terrible? The way out was a re-learning process and along the way I met many fine people, married one of them, found Earth Garden, travelled by bicycle, learnt beekeeping, breeding poultry, letter writing (instead of that telephone), bread-making, gardening, brewing, soap making and now pottery. All these skills are now put to practical use.

Our aim first and foremost is to remain debt free. This has not been easy when our dream is a small plot and shelter. However, it is not impossible, even on a income slightly better than the dole. We found a half acre block for $575.00, and we're on the way to purchasing a building (more skills required here). Leah has beautiful skills, clothes making, mine and hers, herbs, cooking, calligraphy and a personality that bubbles over all who have the good fortune to meet her.

Our needs are now very simple. Besides our bikes we have a small truck of 1974 vintage with a tailgate loader. This one item has proved indispensable. From moving beehives, furniture (ours and others) lifting rotary hoes, timber, treasures found at dumps, firewood and drums (water/fuel) it has been the saviour of my back. It's not much good having got back to the soil, to end up in bed.

Our chief advice to those who believe they have become trapped into the consumer society — get out of debt. That's first. Along the way you could gain a first-aid certificate (you'll be on your own in the bush) learn bread making, soap making and the like. Grow things, in a garden or sprouts if in a flat. TAFE and other institutions are worth investigating to learn new skills, and remember start contributing.

Become involved in self-help organisations. I'm a member of SES, while Leah helps theelderly. And along the way you will meet other kindred spirits as the dream becomes the reality. Your attitude will change, and your sense of priorities will somersault, you will begin to be in charge of the situation, and not the other way round. Do not be in a hurry. You can start where you are now. There are problems in the bush as well as the cities, and many of those who have jumped into the bush are now back in the city. And beware of the trendies — those who believe this wave of self-sufficiency is worthy of promoting in order to fill their own pockets. They stand out like a fast food outlet in a forest to us now, so meet people face to face, those who are the real thing become increasingly evident. Those who receive assistance have a right to feel anger at a society that on one hand creates, wants and then withdraws the means of achieving the desires. But until you decide to do something to better your own lifestyle you become part of the problem. This has become 'people power' or voting with your feet. Governments are becoming more concerned with the BIG capitalists, we must work without Big Brother and become responsible for our own existence.

We see a time when whole towns will become filled with alternative lifestylers concerned with preservation and not consumption. This has happened in isolated areas, but the demand for life with dignity will move further as resources begin to dwindle and more are displaced from the workplace. Now there has been a political change in our State, we may see like spirits moving north away from the pollution of southern cities.

To those who have made the move, we live with you in our hearts. Your letters to EG allow us to touch you all in some small way, and maintain contact with reality in a world slowly crumbling under its own dirt. To EG: great magazine, we like the concept of the tree tax. Should anyone like more info on the land at $500 approximately, please drop us a line.

In peace and Love.

John and Leah Ford, 3/6 East Lane, Clermont, Queensland, 4721.

Goats are good for a laugh

Dear EG,

Thanks for your magazine. I am a goat fan and I really laughed and laughed at the article "Down Wallaby Creek — They do eat Blackberries". Thanking you,

Rowena Mahe, Bundaberg, Queensland.

ATCV tree tax uses

Dear Alan and Camille,

Thank you very much for your donation from your Tree Tax, which of course will be very welcome. Your readers, as the taxed people behind your donation should be glad to hear (or read) that last year Australian Trust for Conservation Volunteers (ATCV) planted 227,000 trees which is a significant increase on the 8,000 trees planted in our first year of operation.

Your readers might also be interested to know the difference between the Federal Government support for ATCV and their support through your tax scheme. At present the Federal Government gives us $4400 on behalf of 16 million people, or 27.5 cents for every 1,000 people in Australia. How much are you giving to us for every 1,000 Australians who buy Earth Garden? Not knowing what your circulation is I will take a guess at 30,000. Taxed at one cent per copy it works out simply at $10 per thousand Australians who purchase Earth Garden.

If ATCV got the same rate of support from the Federal Government, we would receive $160,000 — enough to develop in a new State every year, and increase our operations at the same rate as over the past six years.

I never did like statistics but it does make you wonder about the sincerity of a Government which will not support an organisation that is doing the physical work required to meet the National objectives. How sincere is our Government which will not even give just the simple courtesy of their recognition, with Tax Deductability for donations received from the public?

Have you had a look at the

book 'Our Common Future'? It is Mrs Gro Harlem Brundtland's Commission Report to the UN Commission for Development and the Environment, Oxford University Press. Mrs Brundtland is the only person who has become Prime Minister from the Portfolio of Conservation and the Environment.

Currently Mrs Brundtland is PM for Norway, and in their summary, her commission called for real co-operation of governments, industries, and the community to create a sustainable environment which will result in a sustainable economy. They claimed that only this sort of co-operation would make the world livable for future generations.

Once again our thanks for your donation, which we really do need for our volunteers to be able to continue with our tasks. Yours sincerely,
T B Cox, National Director, Australia Trust for Conservation Volunteers, PO Box 423, Ballarat, Victoria, 3350.

Reinforced glass roofs

Dear Alan and Camille,

I listened to you both on the very interesting gardening program recently on radio station 3UZ. I would appreciate you sending me a copy of the article, as mentioned, from a recent issue of Earth Garden about solar-efficient house building using reinforced-glass roofs.

I understand that Pilkington's now manufacture in Australia, suitable glass for roofs (possibly sealed, double glazed 12 mm min airspace to be effective). I read some years ago about such materials, but in those days it was imported and very costly. I intend to build and I'm aware of considering the northerly aspect with sunshading eaves for summer and lower sun path to penetrate in windows (in winter), and deciduous plantings for the westerly aspect.

I read from time to time *Choice* magazine at the local library. I'm not aware that they have ever evaluated the efficiency and life expectancy of a cast iron (preferred) or thinnish mild steel construction wood heater (touted to be 70 percent efficient and able to heat an insulated 20 square house) compared to the attractive, psychologically pleasing open fire which is just an air-circulating contraption as far as my experience goes.

How do the various manufacturers achieve more than the heaters of 30 odd years ago, which were thrown out with the advent of cheap oil, then natural gas heaters? Sincerely,
Henry Liston, Hampton, Victoria.

Dear Henry,

In the articles on wood heating we have published this winter there is mention of the fact that wood heaters of steel plate construction (minimum 6 mm thickness) can be as long-lasting and efficient as cast iron heaters. An article in the May 1987 edition of Choice *bore out this fact. I found this surprising when I was researching wood heaters, and the wood heater we have ended up installing in our own home (a Norseman Tile convection heater) is partly made from steel plate. Such heaters are called 'improved controlled-combustion' heaters and their operating principles are explained in an article in EG 61.*

Also, I hope that more and more owner builders who are considering building homes with cathedral ceilings will begin to incorporate the solar heating wonders of the reinforced glass roof we wrote about in EG 56, and spoke about on the radio a couple of months ago. —Alan.

~ Values in bark ~

The Arafura Swamp region of Central Arnhem Land in the Northern Territory is remote, beautiful and untouched. "The Aboriginal people of the Arafura Swamp are some of the most 'together' people I have ever had the pleasure of knowing," according to the author of the following article. He spent eighteen months in the Arafura region with his wife, Sheila, and two children, then a boy of ten and a girl of six. As an environmental psychologist and (at the time) Research Fellow with the Australian Institute of Aboriginal Studies, Dr Reser spent most of his time in the field, examining the Ganalbingu people's system of values and attitudes towards the larger environment — their relation to the land, their views on man-made as against natural things, and the symbolic importance of their dwellings.

by Dr Joseph Reser

James Cook University, Queensland.

IT IS A common belief that Aborigines had little in the way of their own style of architecture. This follows on to the view of rudimentary technology and virtually nothing in the way of material possessions. Theirs is a simple way of life. At night they settle down wherever their wanderings have brought them. They may stay there for a few days, laughing and gossiping, hunting and gathering, until the food resources are exhausted. The earth is their bed, and they sleep in the open without shelter.

These ignorant perceptions are perhaps far more revealing about cultural attitudes than they are accurate about indigenous culture and dwellings. There are many definitions of a 'house', and few correspond to the conventional European notion. In Aboriginal Australia, as in the rest of the world, dwellings largely reflected people's needs, lifestyle and economic system, rather than technological limits or shortcomings. Dwellings held a cultural, as well as physical, value.

Houses are institutions as well as places where people live. Varnished pews, incense, and Gothic ceilings demand an attitude of reverence in a more European context; a chair introduced into a traditional Aboriginal social setting 'raises' the plane of conversation and interaction to a metre off the ground. In different settings, different 'house rules' apply.

There is also, of course, an important psychological dimension to where we live, eat, sleep, and from where we cope with the rest of the world. A house is not a home unless we so define it. The psychological implications of our house for familiarity and control, security, identity and social support are extensive and all this is as true for Aborigines as for mainstream Australians — despite current stereotypes. Shelter and security are fundamental and are interrelated.

Different house styles are also a statement about our relationship to the larger world. Whether dwellings are sited in harmony with environmental contexts, for example, is noteworthy. Our built environment determines and reflects our perceptions of the natural environment. Aboriginal dwellings have much to say about attitudes towards the land and the nature of human technology. European environments and values have been characterised by a 'control over Nature' relationship.

Some obvious features of European dwellings include a segregation of 'outside' from 'inside', which simultaneously insulates and isolates occupants. Aboriginal dwellings seem to reflect their interdependence with the openness to the environment. Such houses are examples of 'less is more' in terms of built-in options and general liveability. Australian Aboriginal dwellings achieve a remarkable synthesis of function and form.

Traditional dwellings

The Australian continent, before European occupation, was culturally diverse — and traditional dwellings reflected this diversity and some common environmental factors. Early records include reports of substantial log and sod dwellings, clay and mud exteriors, houses with stone walls, rock and cave shelters, and a great variety of often-substantial bark and brush dwellings.

Dwelling types and living circumstances changed appreciably from region to region and often from season to season. In the tropical north, for example, there is a marked change with the monsoonal transition from wet season to dry season. In central desert areas there are often daily extremes of temperature and conservation of heat can be as important as shelter from the sun.

In Central and Eastern Arnhem Land, as in most of coastal Australia, the ecological diversity and richness of the country allowed for a more sedentary existence. There would have been only two or three principal residential moves in the course of a year. Such moves were largely related to water and food sources though ceremonial life, conflict, the condition of the camp, and simple preference were relevant factors.

In the dry season, from May to November, there is little need of an extensive structure. There are, in fact, advantages in a minimal one. There is no rain, and mosquitoes are far less of a problem than in the wet. The cold at night can be severe, and is better met by carefully banked fires and windbreaks than by more enclosing structures which would block the sun's warming rays in daytime. The other critical need in the dry is protection from the sun during the day, and this is amply provided for by a brush shade which admits breezes.

With the light rains in late November, needs change. Late dry season camps are often situated in low-lying swamp areas, or close to receding billabongs or watercourses. Now there is a rich variety of bush foods, particularly fish, turtles, file snakes, geese, and many vegetable foods. Paperbark forests (*Melaleuca leucadedron*) are extensive in most low-lying regions, and the bark is made to order for protection from rain. At the start of the wet season, stringybark (*Eucalyptus tetradonta*) cannot be obtained, because the sap has not yet started to run. Such trees are also at some distance from camps nearer the swamps.

With the approaching wet season and heavier rainfalls, the mosquito population becomes formidable and determines living arrangements. Shades roofed with paperbark are quickly converted to more enclosed structures which trap smoke and seal out mosquitoes. Often new structures are built, with a light sapling framework and dome shape to maximise closure and space. Again, paperbark is the most serviceable material available.

Perhaps the most striking type of house built in the Arnhem Land region is the stringybark wet season dwelling. Such structures are built when torrential downpours begin, and when the bark can be stripped from trees. Camps have by this time moved to higher well-drained locations, where there is considerable savannah woodland and plenty of bark. These bark houses are strong, simple, and functional. The structure and size of the dwellings vary, but usually there is a basic framework of forked upright posts and crosspoles, over which sheets of raw bark are alternately laid for run off. Such a dwelling typically includes a raised platform floor or loft, and often both.

These structures can take violent rains, cope with wind, fire and mosquito control, and keep people and possessions high and dry. They fit people's needs admirably, and are, in any objective sense, a model of functional design. It is probably not without reason that the forked posts and bark sheets of the gatjawordo (stringybark platform house) have become the symbolic equivalent of human occupancy, and are embodied in myth, ritual, and art in the Arnhem Land region.

Symbolic aspects of dwellings

In most cultures dwellings reflect considerable symbolism. They are the centre of most important human activities, although little attention has been paid to the symbolism in Aboriginal dwellings. The forked post, cross-poles, and bark sheets are regarded as *ranga* or sacred, totemic objects by a number of clan groups in the Arnhem Land region. The importance of the dwelling is often related to the mythology of the Wawilak sisters, who built the first dwelling.

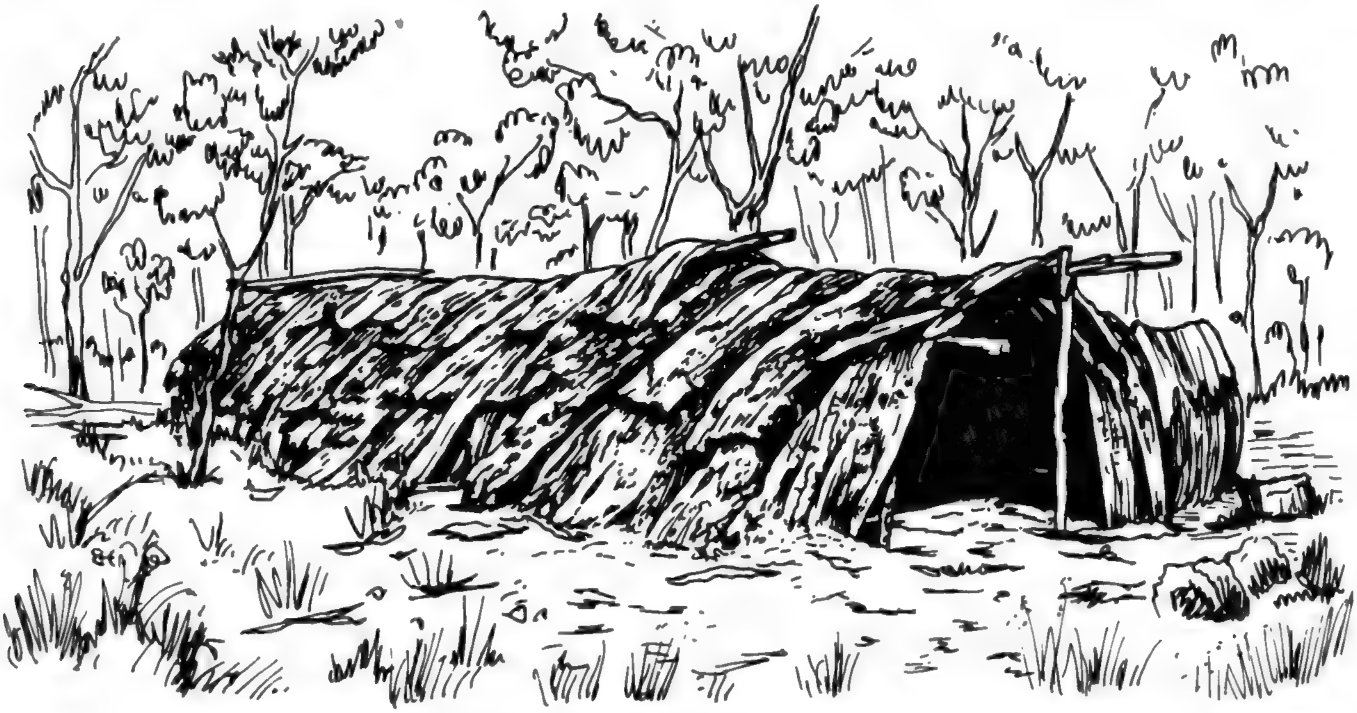
The symbolic use of the dwelling components recurs in ritual, songs, and paintings. The forked post for example variously represents the female principle, the uterus of the Wawilak, the tongue of the rainbow serpent, and the union of the female and male principles. Dwellings are frequent themes in paintings, and dwelling components are commonly used as background motifs by those clans who regard them as sacred. Songs cover dwelling construction, siting, collection of bark, and so forth. There is also frequent use of sacred shades and shelters in a ritual and ceremonial context.

The inherent meaningfulness of traditional Aboriginal dwellings has been virtually ignored. The forked post remnants of a bark dwelling, happened across when walking through the bush, are a powerful symbol of human occupancy.

House materials

It is worthwhile examining the building materials of traditional dwellings to destroy a few prejudices. These materials are a statement of self-sufficiency and appropriateness. The stringybark used in dwellings has been called Arnhem Land's most valued and versatile commodity. It is strong, weatherproof, and easily worked, and can be used for everything from coffins to canoes. Paperbark is also invaluable as a resource, and is widely used for ground cloths, blankets, food wrapping, water containers, rafts, cigarette paper, and, of course, as a lightweight and versatile dwelling component.

Bark is a natural building material with advantages over plywood or canvas in availability, cost, time, workability, and multi-purpose utility. Virtually no tools are needed to work bark, other than fire and water, nor are tools required for construction. There is little investment in time or money (a house or canoe can be built in four to five hours), no mortgage to pay, and no need to arrange employment. No prototype dwellings (European-designed and constructed 'minimal' houses for Aborigines) that have been introduced into the Arnhem Land region have any advantage over a



A substantial stringybark dwelling at Mulyungunuk outstation.

traditional house. The only possible — and less tangible — advantage is a political one; that is, people can see that something is being done in their community, and any type of European housing has high political visibility to evaluation teams and constituents.

The traditional Aboriginal dwelling in Australia is hardly unique, as popular stereotypes would suggest. More than half the world's population today lives around, not in, dwellings and only a small proportion of the world's inhabitants live in anything equivalent to a conventional European house. Subsistence lifestyles and their dwellings produce a far more direct relationship with the environment than industrial societies.

Bark, for example, has been widely used for building, wherever it has been available and suitable. It was widely used by North American Indian groups and by early American settlers, much as was the case in Australia. Circular or semi-circular brush shades and dwellings were used throughout North America and Africa, many being identical in construction and form to the Aboriginal brush wiltja, or paperbark mosquito house. There is a direct parallel between the wet season platform house of Arnhem Land and the Seminole Indian chickee of the south-eastern United States, and a similar dwelling design is found throughout south-eastern Asia.

Traditional dwellings not only still exist in the Arnhem Land region, but are often much preferred in a climate of opinion where being called a *'balanada'*, a European, reflects social censure. Many conventional European houses in larger settlements stand empty, both because of a genuinely motivated decentralisation movement and because of the inherent incompatibility between traditional values and 'other-culture' environments. Corrugated iron has left its indelible mark on most outstation communities, and the use of canvas and plastic sheets is widespread. By any measure of practicality and utility such materials often well suit people's needs, are within their economic grasp, and don't restrict a more traditional structuring of space and environment. In a number of Arnhem Land communities, virtually all of the dwellings are constructed of bush timber and bark.

There are few subsistence cultures where people think in terms of 'environmental resources'; a way of thinking we take for granted which reflects a distancing from the environment, and brings about an exploitative relationship. Aboriginal philosophy is noteworthy in its identification with the natural environment.

The majority of Aboriginal groups in the Northern Territory, and in parts of Western Australia and northern Queensland, are still very much a people in transition. Many values, attitudes, and aspects of everyday life are radically different from the conventional European. Aboriginal attitudes and values toward their environment are of particular interest, not only because of the recent saliency of land rights, and a unique conception of country, but because of a successful relationship with (to the European mind) a harsh and uncompromising environment.

Such perceptions and technological adaptations enabled indigenous Australians to come to terms with their environment for possibly 60,000 years — without endangering it, or radically altering it. There is an implicit 'design with nature' philosophy in an Aboriginal bark and bush timber 'house', and perhaps considerable wisdom.

In a recent UNESCO conference on 'Man and Landscape' in Australia the 'Australian vernacular architecture' discussed was European. Yet the introduction to the conference said that "No matter how earnestly they are implored to do so, Australians are not likely to learn the ways of the Aboriginal inhabitants."

The mythology of Aboriginal groups along the northern coast of eastern Arnhem Land includes the following interesting story. A Macassan, by the noteworthy name of Noa, came by sea to the Arnhem Land coast in the distant past. Noa's boat was loaded with all of the material goods of his culture, including tobacco, axes, rice, and significantly, Macassan dwellings. Noa liked the country he saw, pulled his boat upon the beach, and started unloading the fruits of his technology. Some wild honey bees, who were Aboriginal ancestral spirits, noticed Noa unloading his boat, and they asked why he had come to their country. Noa responded that he thought it was a good country and that he would like to settle there.

He then showed the ancestral spirits what he had brought with him and told them that they could share these things in return for their country. The honey bees expressed little interest in the various goods, and successively turned them down; they said they had their own stone axes, their own bush foods, and their own quite comfortable dwellings. Noa was insistent, and continued unloading his goods and setting up his camp. He refused to listen to the bees' entreaties that he should leave. The bees then stung Noa repeatedly, so that he gathered up his goods, got into his boat, and pushed out to sea. Noa's boat sank some distance from shore; it can still be seen today, in the form of a rock.

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Kalka: Aboriginal mudbrick community centre in the desert

by John Archer

Brunswick Heads, New South Wales.

KALKA is one of the Pitjantjatjara communities in the north western part of South Australia. In recent years it has become a resource centre for the outlying district and a base for the technical and medical services needed in the area.

In 1983 the Homelands Council, the Aboriginal body responsible for policy-making in the area, began acquiring appropriate building literature, particularly on earth construction, videotapes and audio visual material. The Council wanted to build a demonstration earth building in which to house them. I was invited to organise the project.

I arrived in Alice Springs in early April and set off on a month long trip through the Pitjantjatjara communities to examine the sort of housing that existed and each peoples' response to it. At each community we showed slides and videos and discussed housing and earth construction.

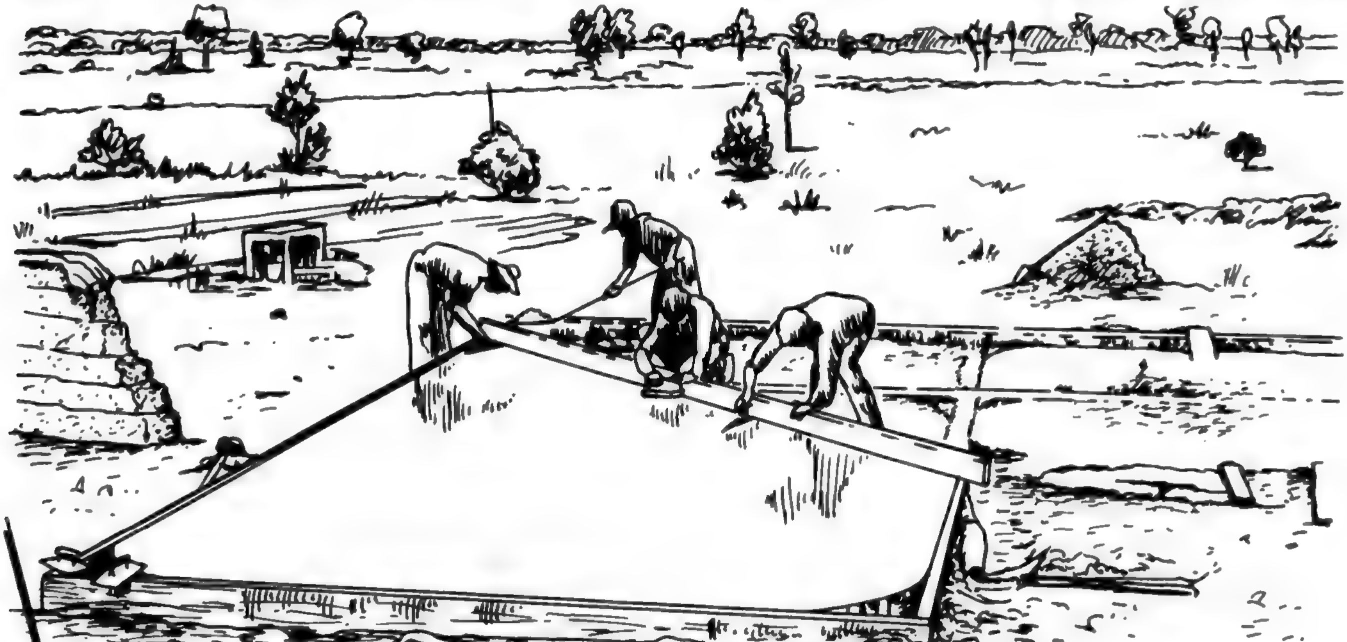
I found several interesting examples, particularly at Ernabella where the original homestead buildings, built in the 1920s, were made from earth. The technique used appeared to be neither mudbrick nor rammed earth but cob built in forms. Also called poured abode in the USA, this technique uses a mudbrick mixture containing straw which is poured into formwork and allowed to dry before the forms are moved.

At Kalka we found a suitably clayey soil only half a kilometre from the proposed site. Test bricks indicated considerable strength but marginal weather resistance. Tests with a hose revealed a tendency for the brick to erode. Experiments with a variety of sealing compounds revealed that acrylic polymer based products like Bondcrete and Locrete did not work well with the red desert soil. However, turpentine solvent sealers like Taubmans Repel and Thomsons Water Seal provide a good solid waterproof surface coating. Once satisfied that the walls could be adequately protected we began brick making.

Using a backhoe kindly loaned by a Western Australian community, we found that in one busy day we were able to mix and transport to the site sufficient soil to make the 2,500 bricks required, and also enough for mortar and render.

The wet mix was dumped on site and remixed with a tractor by wetting it again and running backward and forwards through the enormous man-made bog. Several times the tractor sank below its axles and had to be towed out.

We needed straw or some other fibre to prevent bricks cracking as they dried rapidly in the hot sun. Straw



Screeding off the concrete slab. The curved corners can be seen in the foreground.

turned out to be impossible to get in Alice Springs, which in any case was 1000 kilometres away. Accounts of pioneer desert builders indicated that spinifex was sometimes used as a fibre but the strong spines are needle sharp and quite stiff and in any case it would need to be thoroughly dry.

Next to the building site was a large shade house with a roof consisting of 200 mm of spinifex sandwiched between two layers of wire netting. We decided to sacrifice it and found that when the dry spinifex was mixed into the wet mix it became soft and pliable so that working in bare feet was no problem.

Men, women and children turned up to help with the brick making. Mudbricks speedily began to accumulate on the site and we discussed plans during the tea breaks. The final solution was an L shaped building about 100 square metres in area which would be the Council's office and resource centre.

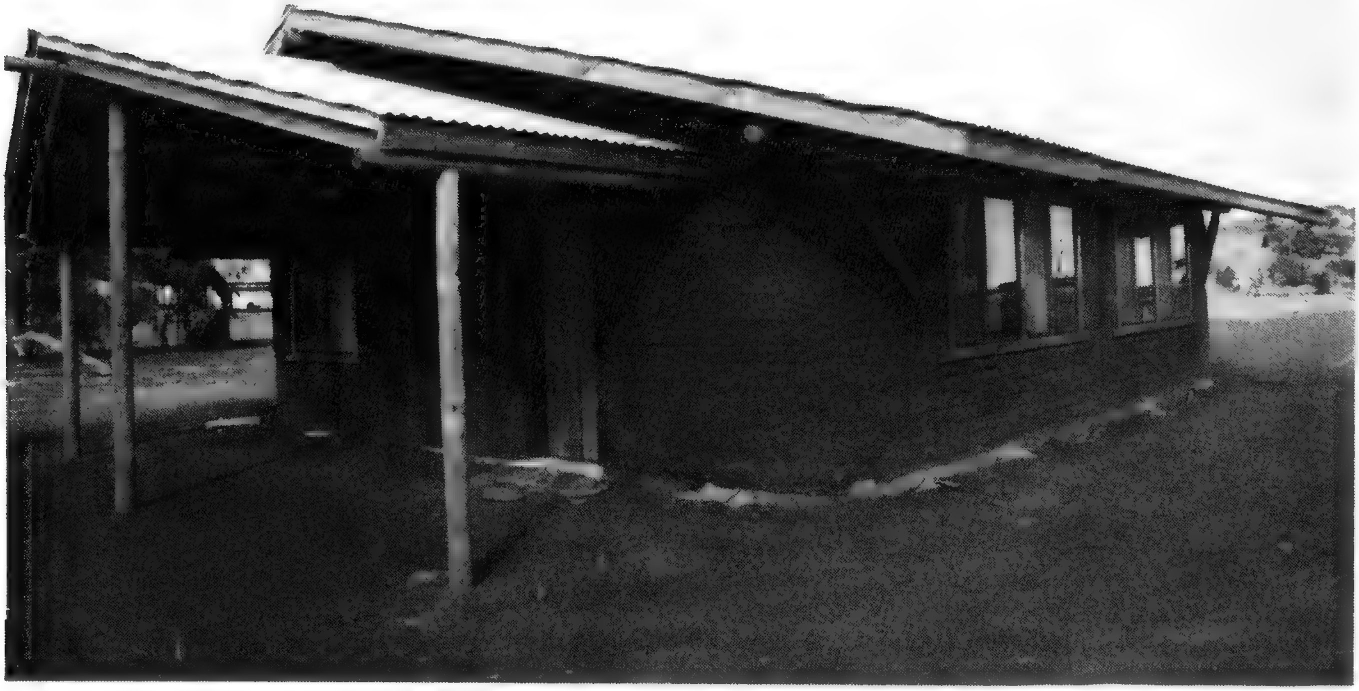
Instead of squared corners, we decided to use rounded ones and the Homelands builder, Dana Dawson, drew up the plans with an arc at each corner based on a one metre radius. Post and beam construction was used for ease of building and also to give maximum protection against wind uplift. No approval was necessary so there were no delays.

In a week the bricks were made, the site was pegged out and prepared and we all got together for the major effort of pouring the concrete slab. Two large petrol driven mixers and 12 volunteers managed to get the raft slab poured, screeded and brought to a steel trowelled finish by sunset. Steel brackets were inserted at the appropriate points for the attachment of the upright posts and door frames made from old railway sleepers.

When the slab had cured pine poles were bolted to the slab and braced in position so that the mud bricklaying could begin. The walls went up quickly. The red sandy clay contained no stones or debris and made fine buttery mortar and render.

Groups of people came from other communities to watch the construction and ended up laying bricks along with everyone else. We used no stringlines and no tools, other than a hatchet for shaping bricks at the curves, and this meant the job was open to anyone. Stringlines were not possible because of the curved corners — an occasional check vertically with a spirit level proved adequate.

It's astonishing how quickly work like this proceeds when a group works together. We built a round mudbrick barbecue for cooking and boiling the everpresent billy of tea. At the end of each day we watched the finished walls turn a rich crimson gold in the desert sunset. As the walls approached completion, everyone involved had gained enough confidence and experience with the material to continue without future problems.



The Kalka Resource Centre, shortly after completion.

Kakadu Aboriginal rangers

Violet Lawson has been a ranger at Kakadu National Park since 1980. Along with Jonathan Nayiji and a number of other young traditional owners, she is bringing her traditional knowledge to play in the science of park management.

TALKING to tourists, checking fences, emptying rubbish bins, installing silicon drip lines to protect rock paintings from rain damage or repairing eroded river banks all come under the heading of 'looking after country'. But they are vital to the success of Kakadu National Park as one of the Northern Territory's major tourist attractions.

Violet and Jonathan are among graduates from the Australian National Parks and Wildlife Service's internal Aboriginal Ranger Training Course. Five trainees, including Jonathan Nayiji, graduated from the fourth such course this year. Three of this year's graduates are employed as rangers within management districts in Kakadu.

The course itself is an innovative introduction to park management skills. Creation of the course was a prerequisite of Kakadu's first Plan of Management in 1979, as specified in the Act which set up the Park. As the park has changed, so training needs have changed and a review this year has recommended broadening training opportunities and emphasising on-the-job training to supplement residential courses.

As with other aspects of Kakadu National Park's management, these changes are being considered by the Gagadju Association, which represents traditional Aboriginal landowners within the Park area.

About one-third of the total area of Kakadu National Park is Aboriginal land and more is under claim. Kakadu has always been home to people speaking a number of languages. Kunwinjku, Gundjeibmi and Mayali are still widely spoken while Gagudju, Erre and Ambukala languages have declined in use. More than 300 Aboriginal people live in the Park in 10 permanent Aboriginal communities — which include outstations and the Jabiru town living area. With the recent declaration of Kakadu Stage III, to the south, these people are joined by Jawoyn speaking people.

The Act which established Kakadu in 1979 obliges the ANPWS to consult local Aboriginal people in formulating the Park's Plan of Management. The rangers are only a part of the employment and management picture. Senior traditional owners from the area like Toby Gangale and Big Bill Nayiji (see Earth Garden Reviews this issue) are employed as cultural advisers. Interview panels for all positions must include an Aboriginal member. And there is direct consultations with the wider groups of traditional owners to look at specific issues.

The Aboriginal involvement recognises that Kakadu is not only about the protection of unique natural environments and one of Australia's richest bird habitats. The rich mixture of natural country floodplains and grasslands, lowland forest and rocky escarpment is only part of the reason Kakadu is one of the Northern Territory's greatest tourist attractions. The fact that it is a storehouse of rich and living Aboriginal cultural traditions is an equally significant factor. It is also home to people who have their own lives to lead.

When the Park was first declared, traditional owners took ANPWS officers through the area to identify and map the 600-odd rock art sites. They advised on which areas could be opened for public inspection and which needed to remain inaccessible for reasons of 'business' or ceremony. Traditional landowners also decided which areas should be closed off as living areas, or because they were burial grounds or sacred sites. Once these areas had been delineated, the traditional owners were further consulted to discuss what protective and interpretative measures should be taken.

At the recently opened Angbangbang Cave — an archaeological treasure on the side of Nourlangie Rock — a wooden walkway winding up and through the cave keeps visitors well back from the floor and walls, but allows them to gain some perspective. Other sites are equally well-protected.

Interpretive material at all art sites gives visitors the right story about particular sets of paintings: their meaning, who or what they represent and when they were estimated to have been created.

Ranger training includes learning about Aboriginal cultures. And there are now courses for guides employed by commercial tour operators. Traditional landowners are also vital in environmental management, advising on fire management, the impact of feral animals and the rehabilitation of wetland habitats. Many have helped in plant identification, using their specialised knowledge about the traditional usage of plants.

As it stands, Kakadu is a model for the meeting of Aboriginal concerns, even without an Aboriginal Board of Management like that at its sister National Park in the NT, Uluru-Kata Tjuta.

But it is a National Park at the crossroads; Kakadu is under increasing pressure from the NT's tourist boom. From a peak of 40,000 visitors in 1982, Kakadu hosted 185,000 visitors in 1987, and growth between 1983 and 1986 was 30 percent a year; in 1987 the increase was 41 percent over the previous year — with more than 80 percent of visitors on their first visit to Kakadu.

This is placing enormous strains on the environment and has the potential to place even greater strains on the people for whom the Park is home. As ANPWS Assistant Director Dan Gillespie warned last year, the time is coming closer when ANPWS will have to think carefully about closing off areas to allow them to recover from visitor pressure. He said many of the traditional landowners shared the concern of park staff about the future. For Kakadu to remain the attraction it is, ANPWS must continue to ensure that visitors and resident owners alike are happy.

This article is reprinted from *Land Rights News* ($15 for a one year subscription, to PO Box 3321, Alice Springs, NT, 5750), the bi-monthly newspaper of the Northern Territory Aboriginal Land Councils.

The Barunga Statement

WE the indigenous owners and occupiers of Australia, call on the Australian Government and people to recognise our rights:

•To self-determination and self-management, including the freedom to pursue our own economic, social, religious and cultural development;

•To permanent control and enjoyment of our ancestral lands;

•To compensation for the loss of use of our lands, there having been no extinction of original title;

•To protection of and control of access to our sacred sites, sacred objects, artefacts, designs, knowledge and works of art;

•To the return of the remains of our ancestors for burial in accordance with our traditions;

•To respect for and promotion of our Aboriginal identity, including the cultural, linguistic, religious and historical aspects, and including the right to be educated in our own languages and in our own culture and history;

•In accordance with the universal declaration of human rights, the international covenant on economic, social and cultural rights, the international covenant on civil and political rights, and the international convention on the elimination of all forms of racial discrimination, rights to life, liberty, security of person, food, clothing, housing, medical care, education and employment opportunities, necessary social services and other basic rights.

We call on the Commonwealth to pass laws providing:

•A national elected Aboriginal and Islander Organisation to oversee Aboriginal and Islander affairs;

•A national system of land rights;

•A police and justice system which recognises our customary laws and frees us from discrimination and any activity which may threaten our identity or security, interfere with our freedom of expression or association, or otherwise prevent our full enjoyment and exercise of universally recognised human rights and fundamental freedoms.

We call on the Australian Government to support Aborigines in the development of an international declaration of principles for indigenous rights, leading to an international covenant.

And we call on the Commonwealth Parliament to negotiate with us a Treaty recognising our prior ownership, continued occupation and sovereignty and affirming our human rights and freedom.

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— The Emu Hunt —

by Sophie Masson

Guyra, New South Wales.

THIRRIL could hardly sleep, he was so excited. As he lay in the shelter beside his family, his mind kept turning over and over, wondering what it would be like tomorrow. He had heard so many stories of emu hunts, and now he would see for himself. His mind held the shape of the day to come — on such a hot, sunny day the hunters would be getting ready and waiting.

Thirril imagined himself swooping on the big bird like the eaglehawk that was his namesake; but he knew he was too young to be allowed the emu's hunting. He would have to wait, and sit with his father till the emu should come. They were going to go down to Rougabaren, the place where the emu drinks. It was the best place for catching the birds. Thirril shifted restlessly, watching the sprits' campfires in the sky that he could glimpse through the leaves and boughs of the shelter. He blinked at them, at the many there were. So many . . . so many . . . his eyes began to droop and he fell asleep.

The next day Thirril was up early with the men and the older boys. He strutted proudly as they got ready to leave; he was wearing a necklace of wallaby teeth, and he was gripping his toy spear. His father smiled at him: "Ready, little hunter?" he said, and Thirril nodded without speaking, full of pride. His sister, Warral, came to him and clung to him and cried. Thirril usually was her playmate on these days. "No, no, Warral, little sister, I cannot play today," said Thirril gently. He was fond of Warral. She had not yet been weaned, and she toddled gleefully around everywhere, falling into people's laps, and asking for fruit and nuts, holding out her hands for the sweet nectar of the banksia. "I will come back," Thirril told Warral, "with emu feathers for you! To make dolls and dolls' clothes!" Warral nodded, all smiles again. She clutched the little bark doll their aunt had made for her. She loved that doll, and took it everywhere, resting in her little coolamon, warm with a scrap of possum-fur.

The men were ready. They set off away from the camp, away from the old people and the children who would stay in camp all day, away from the women who would gather plants and roots and fruit a short distance from the camp. The hunters were headed for Rougabaren, where the emus were plentiful, the hunting good. They spoke among themselves, and Thirril, trotting beside his father, felt proud that he could be included. The morning was still warm, not yet the blinding heat that would drive all creatures into the depths of the cool forest. Magpies and butcher-birds called; rosellas and crimson parrots flashed their bright wings. Here and there the men disturbed a flock of galahs, but they took little notice of them; today they were after bigger game. There would be kangaroos, too, and wallabies. Echidnas and goannas were also plentiful in this land; but the men ignored those. Those were women's game.

Finally they came to the spot agreed on. It was a hollow near the river, shaded by casuarina trees with their long silky branches. Here the emu came to drink. Men had watched them: the wary, curious emu emerging from the forest, the male, the female, the young. Today it was the big male they wanted.

For a while, Thirril watched eagerly as the hunters made swift preparation. They made a pit, covered it carefully with leaves and boughs. The pit was right near a big casuarina, and to the branches of the tree, Thirril's father tied the brightness of parrot and rosella feather, kept specially for the purpose. Then the hunters hid carefully around the pit, taking care that nothing of them would be seen. Thirril crouched with his father under a screen. He watched as his father lifted the emu-calling horn to his lips: tukul, tukul, tukul, said the horn, and the sound was like that of the emu. It should attract emus out of their wariness. But it did not always succeed.

Time passed. And passed. Thirril began to feel bored. He was tired of all the waiting. He gripped hard on his toy spear and grumbled to himself. He thought longingly of the mudslide games the other children would be playing — throwing water down the slope of a river bank to make a slippery, moist slide that sent you with great speed into the cool splashy water of the river. Here, the heat was getting worse. Surely no emu would venture out in this, now? He looked around him, at what he could see of his surroundings through the screen. Insects had started to hum. Little ants were busily marching up and down, gathering food for their camps. Cicadas rubbed their wings deafeningly, there were rustles and creaks and groans from the trees, but no tukul, tukul, tukul.

Yet more time passed. Thirril's eyes were becoming misty with the wait. He had heard no sound from the other hunters. His father, too, sat still and waiting, not even stilling Thirril with an impatient gesture like he usually did.

Suddenly, when the end of the day had begun to settle its long shadows on the land, Thirril stopped his low moans. He had heard a sound quite different from all the bird and animal calls around him. His father stiffened. He lifted the horn softly to his lips and blew. "Tukul, tukul, tukul," came the sound, and then, beyond it, emerging from the forest, came its echo: "Tukul, tukul, tukul . . ." Thirril's heart pounded. Emu! He looked at his father, who had become almost as still, as invisible, as a shadow under a tree. His whole body seemed to be straining into the distance. Copying him, Thirril became still too. He held his toy spear fiercely and gritted his teeth so hard that he felt the wobble of his front tooth. That tooth had been loose for a long while. It was one of the last teeth he had to lose. He closed his mouth gently over it, and waited.

The emu came closer. Closer. Its big, stocky feet pounded along the ground. It stopped, cocked its head, looked with dark bright eyes this way and that. Thirril thought he would burst. A fire was in him. He looked proudly at his father, who was concentrating completely on the big bird out in the open. The emu saw the parrot feathers. Curious, like all its kind, it came towards them. It stretched out its long neck, and then, suddenly losing its curiosity, turned swiftly and was gone back into the forest almost before anyone had realised what had happened.

The hunters climbed wearily out of their hiding-places. They stood around for a while, discussing what to do, but finally decided to make their way back to the camp. Other groups of hunters might have been more successful. Thirril, feeling suddenly tired and wishing he was back with the women and children, hardly dared look at his father in case he should see disappointment on his face. The walk back to camp seemed endless. But when they returned, they were greeted by the warm smells of sizzling kangaroo fat on the fire. One group of hunters had been successful. Soon, Thirril was sitting with the other children by the fires, eating the good meat, the roots the women had gathered, eating the flat seed-cakes they had baked, and gradually his head cleared and his stomach stopped burning. His father glanced at him across the fires. "Old Man Emu is cunning, little eaglehawk," he called to his son, and Thirril nodded. Some of the men rose and began to dance, mimicking old man Emu with his nervous head, his bright dark eyes, looking, looking, and calling, tukul, tukul, tukul! Thirril watched and was drawn in, and thought of the emu with his wife waiting, waiting there in the forest with their children. Their time had not come yet. But one day the hunters would wait again. And this time there would be emu meat on the fire.

The Healthy House Cow **by Marja Fitzgerald.**

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"Let me out of here, quick. I've gotta get The Healthy House Cow!"

Herbs used by Aboriginal people

by Liz Sinnamon
Kenilworth, Queensland.

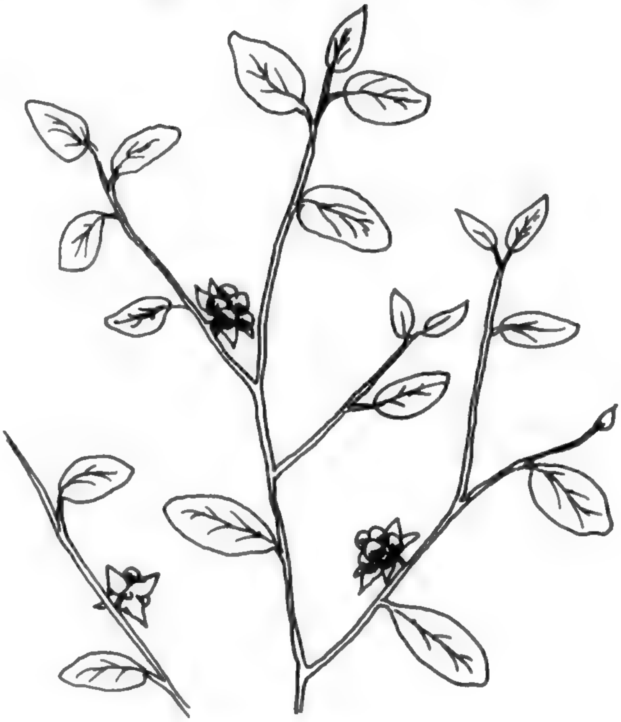
MANY herbs have been used by Australian Aborigines for thousands of years. Two of these herbs are Macassar kernels (*Brucea Javanica*) and the native nettle, or scrub nettle (*Urtica Incisa*).

Macassar kernels (*Brucea Javanica*)

This native shrub belongs to the Tree of Heaven family, the *Simaroubaceae* or Quassia family, a branch of the Rutales, and is allied to the famous Biblical Frankincense and Myrrh.

Brucea Javanica is native to Australia and Southern Asia and is mostly found in the Flora of the tropics and sub-tropics. The genus was named after the explorer James Bruce who suffered an attack of dysentery while travelling in Africa, and was advised to take the medicine made from the kernels of what was subsequently called *Brucea Antidysenterica*.

The Australian Aborigines of North Queensland used the roots and leaves as an analgesic.



Macassar kernels *(Brucea Javanica)*

Native nettle, or scrub nettle.

Native nettle (*Urtica Incisa*)

The Australian scrub nettle is found in all Eastern States, including South Australia and Tasmania, and is often thought to be the European Nettle (*Urtica Dioica*) which it closely resembles.

Both varieties have similar properties and uses. These native nettles are reported to have been used by Australian Aborigines for flogging parts of the body suffering with rheumatic pains.

The Aborigines also used a decoction of the leaves as a lotion for sprains or as a poultice. The following recipe using native nettles makes a specially wholesome sort of ginger beer.

To two gallons of cold water, add a good pailful of washed young nettle tops, four or eight large handfuls of Dandelion and Goosegrass (Clivers), and two ounces of bruised whole ginger (the juice of two lemons may be substituted for the Dandelion and Goosegrass).

Boil gently for 40 minutes, then strain and stir in two teacupsful of brown sugar. When lukewarm, place on the top a slice of toasted bread, spread with one ounce of compressed yeast, stirred till liquid with a teaspoonful of sugar. Keep fairly warm for six to seven hours, then remove the scum and stir in a tablespoonful of cream of tartar.

Bottle and tie the corks securely.

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Down Wallaby Creek

by Jackie French

— A DREAM OF A SACRED SITE —

THEY called the last Aborigine to live around here Big Maggie. I don't know her real name. They called her drunk and disorderly, too. Finally they said she had to go. If she left the district, they said, nothing would be done, the grave men of the court scribbling compassionately and the hatted corsetted women nodding agreement.

They say Big Maggie screamed in the court at the just tidy men and ran down the steps of the Braidwood Courthouse. She was a large woman, but she ran down the mountain road towards Araluen still screaming, yelling in the valley, into the hot air and cicada buzz, over the blue haze as the heat rose from the trees, long wounded shrieks across the country they were exiling her from.

They found her body two days later.

There's an oil dump now at the foot of Jillamatong, the crouching hill behind Braidwood that was once a sacred site — perhaps — who knows for certain now. Pine trees crawl up one side of it and joggers pound to the summit on heritage day. The occasional tourist pamphlet states that Araluen means valley of peace in the local Aboriginal dialect, or place of running water or valley of waterlilies.

Probably it didn't mean any of those things. There's an Araluen in Scotland and various Araluens dotted around Australia, including an Araluen National Park. Probably the valley was never called Araluen until white settlers arrived, but a name that sounded a little like it to foreign ears.

The waterlilies that the Aborigines feasted on disappeared with the gold miners, as the river was dredged for the small flakes of alluvial gold and the creek flats turned over to find the gold vein that never existed and the dark still pools diverted to flush the shining grains from sand and gravel on the lower ridges. The water still flows through the valley except when there's a drought, or the water is sucked up for peaches or vegetables or gardens of roses and geraniums. Clearing at the headwaters up above the valley means there's less deep forest litter, less humus to hold the moisture. The creeks flood and dry up more readily now than they did two hundred years ago — or even twenty years ago. The old sacred sites have gone with the people they belonged to.

Now they are gone it's safe to call them sacred sites. There's no one to object now whatever you do to them. A sacred site is just a footnote in a history book or a titbit for the tourists, probably wrong. Like 'Clarke's Lookout' on the Araluen-Major's Creek road that was too near town for any self respecting bushranger to ever have stopped there for a gander, and anyway, you couldn't see much till the Lion's Club cut down the trees to improve the view and built the concrete platform. But tourists are meant to park there and imagine the Clarke brothers gathered like them on a neatly fenced viewing platform waiting for the stage coach to curl up the road from the valley.

Black sacred sites are accepted now even if we don't respect them. I wonder how long it will be before our culture accepts there may be white sacred sites too — not man-made ones, not churches or parliaments, but parts of the land that we too hold sacred, that we are part of, that are part of us.

Conservation battles are often about economics, which is safe — most large projects have mistakes if you look into the accounting closely enough. Or else they're about preserving resources for our grandchildren — places for them to play or investigate or exploit in their turn. We are rarely prepared to say: "This is my land, I am custodian of it, I would rather kill or be killed than have it violated. I am my country, there is no separating us."

There is no language to talk about it. Even to say "This is my land" is a simplification, is not quite accurate. It is more identification than ownership. It's not just the land. It's the patterns around it, the million complexities, the golden skink licking the fat from its lips, the hard bare ant trails up the hill, the arrowheads of fish motionless in the water while the red casuarina roots flash above them. The total of these things can't be restored. There is no possibility of multiple use with these. You tread softly or you change it all and if your steps are loud enough you may not even notice.

The rufous bettongs on the hill behind the house disappeared last year. Their nests and land were trampled by the sheep. Bettongs are soft and small and kangaroo-like. You only see them with quiet luck and waiting — and rarely as you round up sheep. There were no grass orchids this year either, in the areas where the sheep roam, no sudden flame of indigophera bush sweeping down the cliff in spring. You need to know a place well to see the changes when new animals are introduced.

Half of me watches my garden here, prunes the roses and glories in ripe apricots and tomatoes, lies on fresh green grass, plays with words and music. The other half watches the ridges, too steep for more than minimal human impact, always the gorge behind, waiting.

Sometimes it is the centre of the world.

Near the house it is rockpools and rapids and places for kids to laugh. Further up it is quieter. Sometimes only the water moves; not the air, not us, not the other animals trapped in the silent heat. If a breeze flows it is a local breeze, trapped by the walls of the gorge, smelling of water and lichen and casuarina and deep forest litter. The wind from above rarely penetrates down here; the heat is trapped and the wet chill in winter; the air is hazy, sheltered by the cliffs, so high, so deep, so near that the sun penetrates only at midday. The light is clear green shadows till the sun hits, then suddenly golden haze.

When the wind does pour down here it gusts, huge buffets that knock rocks from the cliffs and send the lyre-birds cowering. It roars out of the gorge into the wider area near the house, throwing trees and bark and webs of dust. It sounds like a Boeing 747 crashing through the thorn bush.

The pools are deeper here. The further up the gorge you go the deeper they get, etched out by floods pounding down the chasm, cracking boulders, carving hollows even in the granite — deep still pools now with smooth cascades or sharper raceways falling into them.

The pools are so green they're blue. You can see the clouds floating in them, still in the summer heat haze, so to swim across them you are flying as well as floating.

Here we are predators among other predators, the small dragons scuttling after dragon flies, the foxes scenting frogs, the leeches humping forward for our blood. We are large animals among the small. You start up the gorge from the house with pack and lunch, clothed and hatted and suncreamed. But the cliffs are too sheer for climbing. Finally you have to swim, and after swimming clamber from pool to pool.

You realise that even loose clothes confine you. Your breasts swing out from rock to rock. You need to find a new balance for your body to counter them, a new rhythm for walking; and the sun feels different on the separate parts of your body.

Some of the wonga vines are thick enough to swing on, to build a basket or a bridge. They twist around each other, a three or four strand rope, perfect circles drooping from trees to cliff to water.

The perfume is trapped here when they flower. The air is golden with pollen, rich with moisture as the water falls and falls again, as we walk from sun to shadow, slide into the water like white lizards, beak the warm surface and the cold water underneath rolls along our stomachs. The water is never warm. Often bitter, sometimes cool. But the rocks breath heat, cast it through your bones, radiate it deeply so, lizard-like, you're warm again and the gold flecks glow from the granite.

You can sit for hours in the gorge. Time is only the darkness growing from the cliffs till only the pale rocks and downward slope guide you back. Watching the leaves slip over the water of the silent pools till they are caught, collected in eddies as the creek falls further. Listening to the sharp alarm calls of the lyrebrirds, till they grow calmer, forget us, come to dance, bums up and legs out. Watching rainforest dragons bask in coolness under water, the hot air turn liquid in the dark.

Sitting here in the blue light smelling the waterfalls. Outside the world spins and rumbles. Here there is sand air water and rock and the wildlife of the gorge and us. This is the still heart, the centre of the world.

Years ago, teaching English to some Aboriginal women, one told me: "You forget how to listen in the city".

Cities are human. They are simple because they are only human, everything created or modified. There is too much going on, not quite linked together. You have to shut things out. When you finally go back to the bush you have to learn again to use your senses, to learn to listen to everything, not just one or two things that are loudest or most interesting. It took me years of living in the bush to hear again and see, the sudden shock as the peripheral vision widens as you learn to accept and not shut off.

I am as much ruled, as much modified by this place as it is by me. Probably infinitely more. How many generations does it take for us to become Aboriginal?

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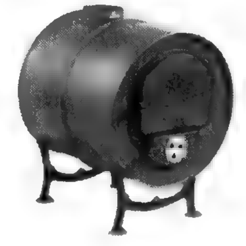

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Talking history interview: Gary Foley

Gary Foley was born into the Gumbangerie people in 1950 at Grafton on the north coast of New South Wales. At 17 he moved to Sydney. Since then he has been at the centre of major activities of the Aboriginal movement in eastern Australia, most recently in Sydney on 26 January. He first experienced politics "hanging around the fringes of FCAATSI (Federal Council for the Advancement of Aborigines and Torres Strait Islanders) and found the 1966 walk-off from Wave Hill Station by Gurindji people an "enormous inspiration". Gary talks about the background to the Aboriginal Tent Embassy which stood on the lawns outside the old Parliament House for six months of 1972.

"THERE were very significant developments occurring in the late 60s and early 70s in Redfern in Sydney. Before that in Sydney the Aboriginal population was fairly minimal, about 5,000 to 10,000 people in the metropolitan area, including the Aboriginal community of La Perouse.

This was partially because of the apartheid laws that existed at that stage, the Old Protection Act, which to a large extent kept Aboriginal people in the so-called reserves, concentration camps: 45 of them throughout New South Wales.

But all that changed with the demise of the Protection Act and the '67 referendum. Both were the result of campaigns by groups such as FCAATSI. In New South Wales the effect was that one day Aboriginal people were virtually enslaved and imprisoned on the reserves and the next day they were free to make their way in the white man's world, so to speak.

The only problem was that the people who, in their wisdom, had run the previous old apartheid system hadn't considered it necessary to provide adequate education or anything for Aboriginal people on the reserves and suddenly there was a situation where around 40,000 Aboriginal people throughout rural New South Wales were no longer in a position to be recipients of the old handout system. They were, in effect told to "get out and earn your way in the world".

Now in rural New South Wales in 1967 and 1968 there was a recession and there wasn't even sufficient work for non-Aboriginal people in those areas. And the last people hired were the first to be fired.

In those days in rural areas of New South Wales there was nothing really for Aboriginal people. And if you were to survive and put food into the stomach of your family you had to work and this inevitably led to this massive exodus, essentially to Sydney.

The Aboriginal population of Redfern and the inner city area went from about 10,000 people to more than 30,000 people in the late '60s. This created an enormous problem for both the Aboriginal community, and others. The people arriving from the country were not exactly trained as brain surgeons, or anything like that. They couldn't get high paying jobs and go and live in the North Shore.

Aboriginal people felt safer congregating among their own so this almost ghetto-type situation developed. As a result of that, all sorts of problems presented themselves to the Aboriginal community. The first and foremost was in the form of the police. For reasons known only to themselves they began conducting an outrageous harassment and intimidation campaign in the Aboriginal community.

It was almost like a constant reign of terror about the Aboriginal community. You just couldn't go anywhere after dark in Redfern without the fear of being harassed by coppers cruising the streets.

The old Empress Hotel in Regent Street was one of the main social congregation points for the Aboriginal community and there was the Clifton Hotel further down Regent Street. Blackfellas used to call the Empress the Big E and every Thursday, Friday and Saturday night at the Big E, after a certain time at night the coppers would just line up their police wagons out the front like a taxi rank and just go in and indiscriminately grab anybody.

It was as though they had a quota system operating. They would just go and grab you, throw you in the wagon, take you up to the cells, lock you up, and charge you with all sorts of weird and wonderful things. If you objected you got a flogging.

First Aboriginal legal service

So a group of people came together to try and do something about that. To cut a long story short Gary Williams, Paul Coe, myself and a few others began a move to try and figure out some way of either stopping the police campaign or protecting the Aboriginal community from the police. That resulted in the establishment of the first ever Aboriginal Legal Service in Australia — the New South

Wales Aboriginal Legal Service.

This was an extremely important turning point in Aboriginal history not only in New South Wales but also nationally, because it was a major precedent in terms of Aboriginal control of Aboriginal affairs. It resulted in an organisation that was the first ever in New South Wales that was conceived, designed, established and controlled by Aborigines.

The psychological boost that gave the community once it was established led to the creation of Health Services. From that period in Redfern, which is one of the most exciting, politically dynamic periods of the Aboriginal movement that I've been involved in, a whole range of things emerged. Coe and others established a 'breakfast for the kids' program in a park in Newtown. This and the legal service were both ideas that we had adopted and adapted from the Black American political situation on the west coast of America in Oakland, California.

We were learning from those experiences simply because at that time any sort of information about the native American or any other indigenous peoples' struggles were just not available to us. Even political literature from Black America, which we were learning from, was very difficult to come by.

These were examples that we learned from, but we adopted and adapted those ideas to suit our own needs. The 'breakfast for kids' in the park, an idea we stole from the Black Panthers in Oakland, was eventually taken over by a bunch of Aboriginal women who turned it into what it is today: the Murawina Aboriginal Women's and Children's Centre in Redfern. National Black Theatre emerged around about the same time.

This was a really dynamic period. It created the conditions whereby the Aboriginal community was starting to flex its muscles a little bit and starting to apply a little bit of strength, starting to develop its own ideology and philosophy, politically.

With the Gurindji struggle continuing in the Northern Territory, slowly but surely Aboriginal voices were starting to be heard calling for things like Land Rights. These were perceived as new words and concepts that white Australians considered came out of nowhere. In response to our pressure on Australia Day 1972, Prime Minister Bill McMahon decided to make a policy speech regarding Aboriginal Land Rights.

What he said boiled down to saying that under Liberal-Country Party Government, there was absolutely no possibility that Aboriginal people would ever obtain Land Rights. So that night a bunch of us got together in a house in Erskinville and had a yarn about this and we made a decision that we shouldn't let him get away with this. There had to be some sort of response from the Aboriginal community. We couldn't take this lying down and so we dispatched four people to Canberra that night. They were Billy Craigie, Tony Coorey, Michael Anderson and Bertie Williams.

1972 Aboriginal tent Embassy

Their instructions were to go down and start a demo in Canberra on the lawns of Parliament House just with placards until we had enough time to organise other people to get down there and get a decent-sized demonstration going. Now as it happened, and in an extraordinary stroke of luck, these guys went down there and set up a tent on the lawn of Parliament House.

It wasn't until they did that and the police were trying to figure what to do about it that suddenly we accidently found a loophole in Canberra law — ACT law — where it was actually technically not against the law to camp on the lawns of Parliament House. We were told by the police that as long as we only ever had 11 tents there, there was nothing the police could do about it. Now if we put up twelve it would have been deemed to be an illegal camping area and we could have been shifted.

And so the Aboriginal Embassy was born. We decided to call it the Aboriginal Embassy because we considered that McMahon's Australia Day statement had in effect declared Aboriginal people aliens in their own land. We said that if we were aliens in our own land then we should have our own Embassy like all the others. The only difference with our Embassy, we said, was that it won't be up in Red Hill with all the other rich Embassies. Our Embassy will be on the lawns of Parliament House under the noses of the Australian politicians. Our Embassy will reflect the living conditions of Black Australia.

So we set up 11 tents and within 24 hours we were officially recognised by Australia Post (I think they called it the Post Master General in those days) because we set up a mailbox outside our tent and the PMG started delivering mail.

We were there perfectly legally, it was a peaceful demonstration and it captured the imagination. It was such a brilliant concept, almost an accident in many ways, but this group decision had resulted in an innovative, imaginative, brilliant little demonstration which ended up staying on the lawns of Parliament House for six months.

For six months there was increasing publicity. Eventually even the tour operators realised that we were of much more interest to the tourists than Parliament House across the road. The tourist buses would pull up and the operators would unload their people and they'd come and talk to us and find out what we were about. We distributed literature, they made donations and it became a very effective and powerful protest.

Winter on the lawn in Parliament House in Canberra was the coldest in my life and I never want to go through that again. But we survived because of the support of ordinary people in Canberra. People like the students at the ANU used to provide us with money and support to keep us going and organised white people in Canberra to donate blankets and tents and anything else we needed. At the height of that winter white families would turn up at night with thermos flasks of hot soup and stuff like this.

We always had essentially a skeleton staff running it which used to vary. People would come from all over Australia, spend a week at the Embassy to sort of indicate the support from people in their region, and then they'd go home and share the experience . . . tell the people back home what it was all about. In lots of ways it was a rallying and focal point for the movement.

Eviction

Then by about July the McMahon Government realised that they had a Commonwealth Heads of Government conference coming up and it was going to be held in Canberra. The embarrassment they thought that they'd get from all these Commonwealth Heads of Government arriving and seeing a bunch of blackfellas camping on the lawns across the road frightened the McMahon Government.

They decided to pass a law to make it illegal to camp on the lawns of Parliament House. Gough Whitlam, who was the Leader of the Opposition at that time, said the way in which they went about creating this law was 'furtive' because they passed the law in the middle of the night. At nine o'clock the next morning they gazetted the law and at one minute past nine the police moved onto the Aboriginal Embassy. So they moved in and we formed a circle.

It caught us by surprise a bit. It was so unexpected. They did it in such a shifty manner that I only found out they were putting the law through late that night and I somehow managed to jump onto a plane about seven o'clock in the morning and actually got there before the eviction started. This was in the days when it cost $11 to fly to Canberra.

When I arrived there was a bunch of Aboriginal people there but the word went out quickly in Canberra and soon a large number of other Canberra people came out and joined us to support us. When we realised the police were going to knock the Embassy down we decided to let them pack the other 10 tents and we formed a circle around what would have become the office of the Aboriginal Embassy.

We said to them "We don't want trouble but if you touch this tent were going to have to defend it". So there was a bit of violent confrontation. People like Bobbie Sykes and myself both got arrested. I ended up in hospital and there were about seven people arrested in that first confrontation.

Outrage

The shock waves after that day went around Australia and the response from Black Australia was truly remarkable. In some parts of Australia, soon as people heard the police had knocked the Embassy down, they just jumped in their cars, I mean people from Western Australia, jumped in cars and started driving east with no thought of how the hell they might get to Canberra or how they might survive.

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They called at Aboriginal communities on their way, getting more support and picking up more people. By the next weekend about 5,000 to 10,000 people had gathered on the Parliament House lawn for a major demonstration.

We re-erected the tent and once again the policemen in Canberra were on duty and once again there was an extremely violent confrontation. It should always be remembered that the violence was not initiated by us. We were simply trying to defend our Aboriginal Embassy and they knocked it down again in another major demonstration where dozens of people got arrested. So the reaction was heightened as more and more people decided to head for Canberra, both Aboriginal people and their supporters.

So on the third weekend we had this extraordinary situation where it was the biggest demonstration of Aboriginal people ever in Canberra's history. The Canberra establishment politicians freaked out. They had every Canberra police officer on duty outside Parliament House that morning. They had the New South Wales riot squad on stand-by hidden behind Parliament House and they even had Duntroon Military College on stand-by, just in case. Potentially it was a very dangerous situation.

To the everlasting credit of the Aboriginal leadership at that time we set up the Embassy again. About 15,000 to 20,000 Aboriginal people and their supporters marched from the ANU over the bridge to the front lawns of Parliament House, set up the tent, and challenged the police to take it down again.

We felt that we'd established a significant moral victory anyway. The whole of Australia was on tenderhooks that day because no-one knew what might happen. Predictions of violence were similar to those wild predictions made in the lead-up to 26 January this year and so it was a very tense and dangerous situation.

Aboriginal leaders decided "Okay, we've made our point. We've done this with dignity and self respect. What we'll do now is make our token symbolic protest as they take down the tent". We asked the crowd to just stand back and create a path through for the police and we all stood around and cheered and jeered as they took down the tent. It was seen and regarded as a major moral victory largely because we managed to prevent violence which may have resulted in people being killed.

We had made our point and achieved our moral victory and we were the stronger for it. We made headlines around the world. Gough Whitlam, as Leader of the Opposition, was able to capitalise politically on some of this in the subsequent election campaign leading up to December '72.

For the first time in the history of this country Aboriginal Affairs was a major election issue. The events at the Aboriginal Embassy when the police had smashed it were direct contributing factors to the downfall of the McMahon Government.

It is historically politically true to say that Aboriginal people and Aboriginal issues played a key role in the demise of the Liberal-Country Party Government that had been in power for 30 years up until that point.

It was because Aboriginal people had played such a key role in terms of issues in that campaign that virtually the first act of the Whitlam Government, within days of being elected, was to upgrade the office of Aboriginal Affairs into a fully-fledged department and to create a special minister for it. Now the intent behind what Gough Whitlam did was fine and admirable. He had a genuine desire to create some sort of situation whereby significant resources could be dispensed to Aboriginal people.

The only unfortunate aspect of it all was in order to do that he had to create a Government Department which ended up being the Department of Aboriginal Affairs. I think it would have been very hard to predict that it would turn out to be the evil sort of organisation that it ultimately became. I mean I believe that Whitlam acted in good faith and there was a genuine desire to do something to improve the life of Aboriginal people and so that's how the Department of Aboriginal Affairs came into being.

Ultimately, Whitlam, in one of the most significant acts of his Government, was able to grant the Gurindji the land that they fought nine years for. It was very moving when he poured the dirt into that great old man's hands."

This interview is reprinted from the fascinating 'Talking History' series in *Land Rights News* (see page 15 for details), the bi-monthly newspaper of the Northern Territory Aboriginal Land Councils.

access

Dandenongs Garden Festival

An 11 day garden festival and exhibition is being organised from October 22 to November 1, at the National Rhododendron Garden at Olinda in Victoria's Dandenong Ranges.

Over 50 exhibitors are expected for what promises to be the biggest gardening event ever held in the Dandenongs. Demonstrations and a garden advisory service will operate throughout the show. Well known gardening personalities will attend, including Glen Heyne (3UZ radio), Graeme Ross (GardenScene magazine) and John Mason (the Australian Horticultural Correspondence School).

Organised by Let's Grow Garden Club, the festival will feature major displays on Herbs, Rhododendrons and Bonsai. A wide range of plants, seeds, bulbs, gardening books and garden products will be on display throughout.

With the entry fee to the gardens remaining the same as throughout the year ($3.50 adults, children free), this promises to be the excellent value for Victorian gardeners. Contact Let's Grow on phone: (03) 736 1882.

North Queensland cave paintings

by Jose Robinson

Wild Cattle Island, Queensland.

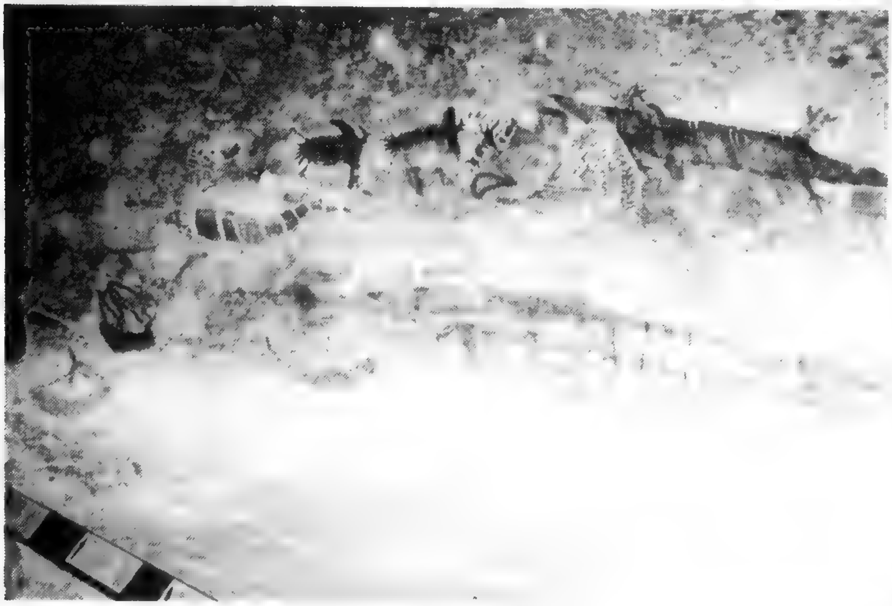
I WAS fortunate last year while cruising the Queensland coast in my yacht, to spend some time on the Flinders group of islands in Princess Charlotte Bay in the northern part of the State.

The Aboriginal cave paintings I observed in a well-camouflaged series of caves on Stanley Island were a magnificent sight to behold. One of the larger caves is known to locals as the Ships' Gallery. In this cave there are paintings depicting all manner of ships. Some are multi-masted schooners, others look rather like Spanish galleons.

The artists had a commanding view of the waterway from the excellent vantage points of these caves. A steep climb winding up a cliff face is the only way into these caves and from the top there is an unrestricted view of miles of coastline. No doubt early travellers were completely unaware that talented Aboriginal artists were laboriously depicting replicas of their craft onto the cave walls.

It's easy to believe that some of these paintings could be from the pre Captain James Cook era, when Spanish craft may have sailed into the then uncharted waters.

Art has always been an important and integral part of Australian Aboriginal culture. The pigments used in these paintings were naturally occurring clays and rocks. Gypsum and pipeclay were a readily available source of white colouring and black was often obtained from charcoal. Various oxides, dust from inside ant's nests and sometimes fungus, were exploited as sources of yellows and oranges. Bright red, one of the principal colours used, was derived from various clays and rocks.



Some of the other Flinders Islands caves had paintings depicting animals and reptiles. Crocodiles and turtles feature strongly as subjects. They often used examples of stencilled human and animal feet and hands, as well as a range of weapons and what appeared to be stories of hunts and other events.

The act of painting plus the finished product are firmly associated with ritual and magical and religious significance in Aboriginal culture, while the artists themselves were considered special beings.

Although I've observed many other outstanding Aboriginal cave paintings throughout Australia, none the least of these being in central Australian ranges, the elaborately executed Flinders Island Ships Gallery stands out in my humble opinion as a very fine example of cave painting.

ON THE tropical and northern Queensland coast, traditional Aboriginal groups construct two basic types of canoes for their hunting and food gathering. Dug-out canoes are made from a special type of hollowed-out log and are quite suitable for sea voyages.

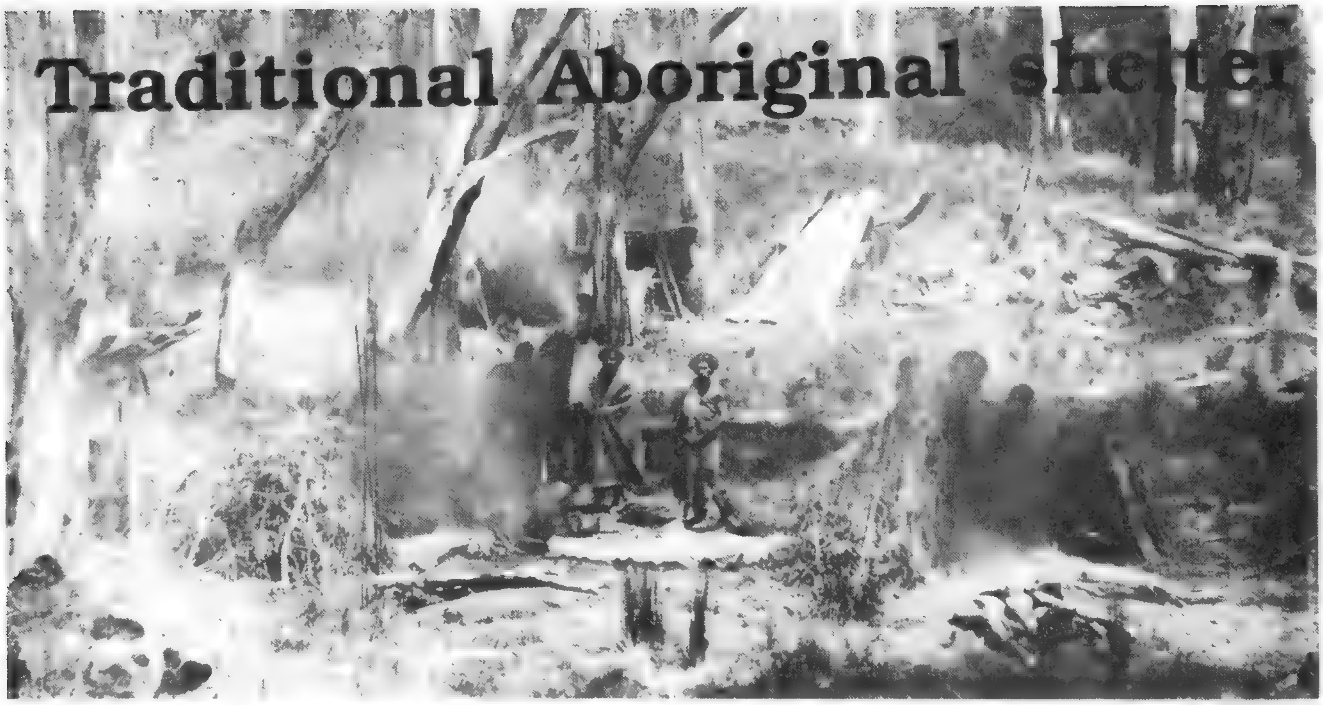
The sewn canoe was constructed from broad strips of bark stitched together and strengthened with a network of ties, stretchers, ribs and braces. Poles were lashed along the bulwarks to act as gunwales and to prevent the sides from collapsing. These craft were slightly more sophisticated and superior to those used further south in rivers and creeks.

On the lakes of the Murray River Aboriginal women used rafts constructed from layers of reeds to reach mussel beds far from shore. These rafts were propelled with a long pole, and eight to ten women could occupy one raft. The women dived from the rafts in search of shellfish and crayfish. They would pile wet seaweed and sand on top of the raft platform and build a small fire to cook the food.

Simple bark canoes were made from a large sheet of thick bark pointed at each end. The bark was manipulated while still fresh and pliable, to form a canoe shape. This simple craft was used to cross rivers and lagoons, and also for fishing. The use of these fairly fragile craft was limited to protected inland waters.

Coastal bark canoes were made rather more durable. These were constructed from large cylindrical sheets of bark which were turned inside-out and bound at the ends with fibre rope. The outer bark shell of the canoe was straightened by rod-shaped stretchers fixed across the canoe and pliant branches forced into the body to act as ribs.

Traditional Aboriginal shelter



Bark and brush shelters in Gippsland, Victoria, photographed by Antoine Fauchery in 1858.

by John Archer

Brunswick Heads, New South Wales.

FOR thousands of years before European occupation, Australia was a land of great cultural diversity. Languages, customs and technology varied considerably as Aboriginal people developed appropriate responses to the regions in which they settled. Nowhere is this more obvious than in their dwellings.

In his book *Natives of Australia*, written at the turn of the century, N W Thomas compiled a series of descriptions of Aboriginal houses extracted from the accounts of early explorers and anthropologists:

"The Australian native is commonly represented as possessing no permanent habitation; hardly anything, in fact, which can be called a hut. This is not even true of Victoria, still less of the natives of northerly districts, who found themselves in need of protection against the rain more than the natives of the south needed shelter from the cold of winter. The prevailing type in the south is or was the bark hut or rather breakwind, formed by sheets of bark arched over, or by boughs or both. This afforded little shelter, but the open side was turned round so that it was away from the wind, thus sheltering the fire, which stood on the same side and allowed the wind to drive the smoke away . . . "

The windbreak was a camping and a travelling shelter which was quickly and easily built. It also provided an outside sitting and cooking area to complement some of the more substantial dwellings which have been recorded.

The explorer Peron observed a settlement of huts when he visited Shark's Bay on the Victorian coast. These were built of logs covered with soil and plastered with clay, 16 feet long and carpeted with seaweed; in the walls were recesses for storing implements, the entrances were about three feet high.

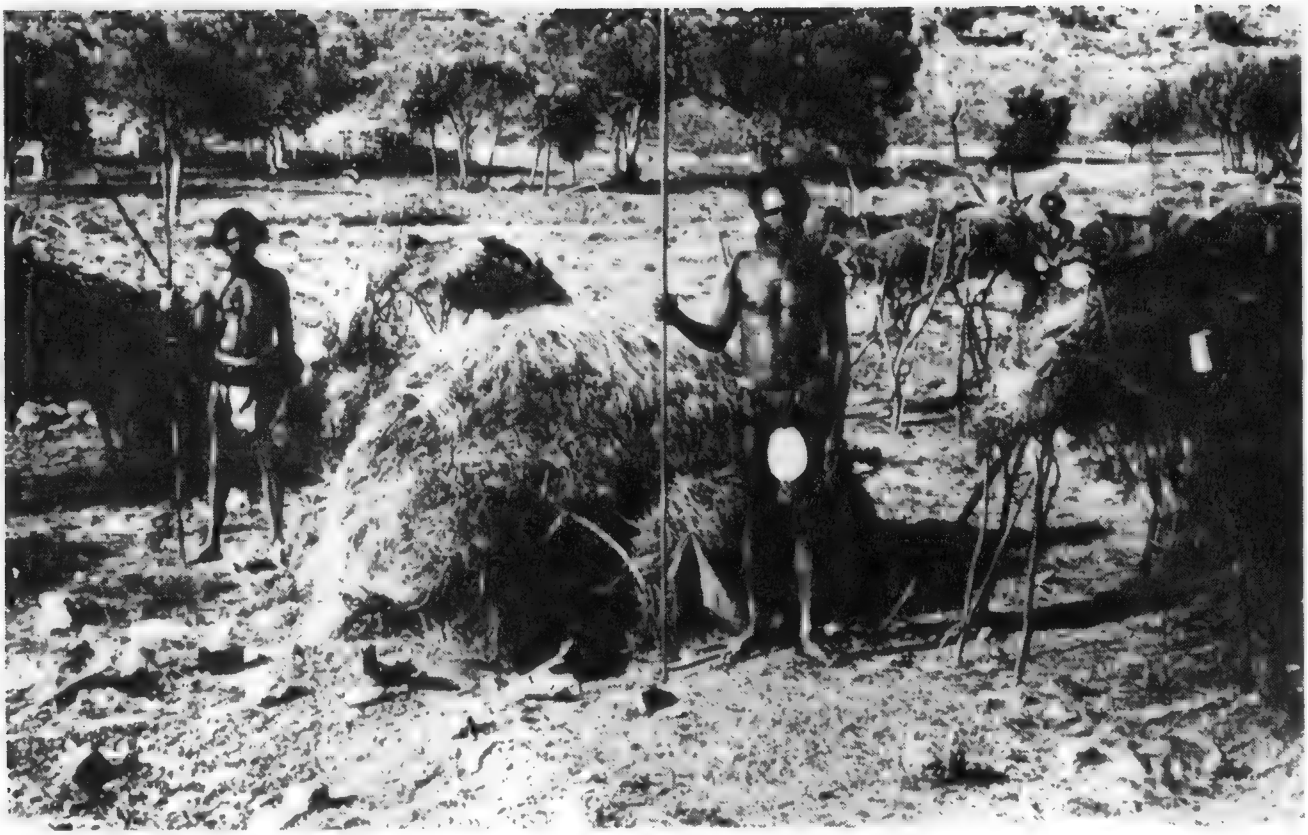
Near Mount Napier (Victoria) Eyre found a village of 13 huts:

"They were cupola-shaped, made of a strong wood frame covered with thick turf, the grassy sides inwards. Some were semicircular, some had two entrances, one was ten feet by 15, and so strong that a man could ride over it. At Port Fairy similar erections were found, some large enough for 12 people, and higher than most of the native huts: they were six feet high and had a floor of bark.

In the roof was an aperture nine inches in diameter for the smoke to escape, which in wet weather was covered with a sod."

Of a different type from the Port Fairy huts, but equally permanent, were those seen by Eyre at White Lake. These were circular, made of straight rods meeting at a central upright pole; the outside was first covered with bark and grass, then coated with clay. The fire was in the centre and the smoke hole was made in the roof. On the Gwydir, Mitchell saw another type of a slighter construction, but remarkable for having a conical roof with a portico on one side supported on two sticks.

Collins describes a hut at Shoal Bay made of vine tendrils crossing each other lashed with wiry grass. The walls were of Melaleuca bark and the hut was weatherproof; it was eight feet in diameter, and four and a half feet high, the



Dome-shaped grass-covered shelters, or 'wiltjas' as they are called in Pitjantjatjara, provide relief from the sun in central Australia.

entrance was by a small avenue with a turn in it and fires were lit inside. One was large enough for 15 people.

At Moreton Bay another type was found, formed of three sticks meeting at the top, which were covered with Melaleuca bark. It was only large enough for one family, and they slept in a semicircular position on bark, covering themselves with skins.

Thomas was one of the first to point out the diversity of styles and materials used in Aboriginal house construction. Most observers simply assumed that the particular house form which they saw in one area was common throughout the whole country.

In addition, the nomadic behaviour of some Aborigines and their seemingly casual approach to material things like houses shocked the English to whom such attitudes were almost incomprehensible.

Sir Joseph Banks noted from the comfort of his cabin on the "Endeavour":

"Naked as these people are when abroad they are scarce at all better defended from the injuries of the weather when at home, if that name can with propriety be given to their houses — as I believe they never make any stay in them but wandering like the Arabs from place to place set them up whenever they meet with one where sufficient supplies of food are to be met with, and as soon as these are exhausted remove to another leaving the houses behind, which are framed with less art or rather less industry than any habitations of human beings probably that the world can shew."

The myth that Aborigines were unwilling or unable to build more substantial shelters still persists in some architectural and anthropological circles. In his classic book *House Form and Culture* Professor Amos Rapoport wrote in 1969 that the Tasmanian Aborigines had no houses because "their ability to build was not developed beyond the windbreak."

Architect Robin Boyd wrote in *The Walls Around Us* (1962, reprinted by Angus and Robertson, 1982):

"The Aborigines might have been like the original natives of most other regions of the globe. They might have been builders of some sort of crude houses to protect themselves from bad weather and wild animals and human enemies. They might have built cabins of rocks piled on the ground or huts of sticks wedged up in the branches of trees, as others did. They might have built on top of poles out in the water, as some of their New Guinea neighbours did.

But they built nothing. They were content to arrange a few clumps of grass and bark as a shield against the night wind and in a few days to move on to new ground in the hope of finding a richer spread of witchetty grubs and roots.

The reasons for this Aboriginal lack of initiative are simple enough. Nature just did not press the Australian Aborigine into the creation of shelter."

Nothing could be further from the truth. In northern Australia the heavy rains of the wet season, the intense heat, and the nuisance of mosquitos and sandflies led to the development of buildings that vary not just from area to area but from season to season. The abundance of food on the coast meant people could stay in one spot for longer and could therefore build more substantial and complex houses.

Queensland pioneer Edgar Patterson recalled in *Walkabout* magazine (September 1, 1937):

"In the far north of Queensland, probably the most popular type of native dwelling is a circular grass-and-bark hut, which resembles in some respects the kraal of the African Zulu. It is easily and quickly made of curved branches so arranged that they form an interlaced network, over which grass and strips of bark are hung, and are tied in place with vines. Some of these huts measure up to 30 feet in diameter and seven feet in height in the centre.

From time immemorial the Aborigines in the far north have used mud extensively in building their primitive homes. Probably the largest native mud houses to be seen in the Commonwealth are in the Roper River district (Northern Territory). Many of the tribes in this district build huge, mud-plastered houses, which are constructed by fastening a stout ridge-pole between two adjacent trees or two poles sunk into the ground. Other poles are leaned against the ridge-pole from both sides, and these are covered with reeds and grass, and finally with wet clay, which is thoroughly plastered in and smoothed down by hand. These huts are often up to 30 feet in length and ten feet in width, and will accommodate two dozen natives with ease. A narrow doorway, about three feet high, is left in one end, the other being closed.

Queer mud huts, remarkably like the tepees of the North American Indians, are also built by some of the tribes living in the coastal area of Arnhem Land. These are constructed by erecting poles or branches around about five-sixths of a circle, six feet or eight feet in diameter, and meeting at a point eight feet or ten feet above the ground. The bottoms of the poles are embedded in the ground, and they are securely tied with vines at the apex. The sides are made perfectly watertight by being plastered with a 'cement' made of a mixture of leaves, grass, and clayey mud. Loose sheets of bark are provided for a door.

Peculiar double-storied houses are built by some of the Cape York Peninsula tribes. The dwellings are built on the ground, and have a stout framework of saplings tied

Aborigines at Port Macquarie cutting bark from paperbark trees to be used for making shelters in 1910.

securely at the joints with vines. In most cases the walls and roof are of sheets of bark sewn together with animal sinews, but a few of the homes have roofs of thatched grass. The floor between the upper and lower rooms is of saplings covered with bark, and rarely are any of the rooms more than five feet or six feet high. The upper room is the sleeping-place of children, while the parents occupy the lower room."

Aborigines used a wealth of natural materials — sticks, bark, leaves, rushes and reeds — and developed special techniques to increase the effectiveness of each building component. The thick, strong and waterproof bark of the stringybark tree was softened over a slow fire, which melted the sap and allowed the bark to be shaped into canoes and coffins or flattened into sheets for roofing. Paperbark was even more versatile, being useful for blankets, ground cloths and food wrappings and as a building material.

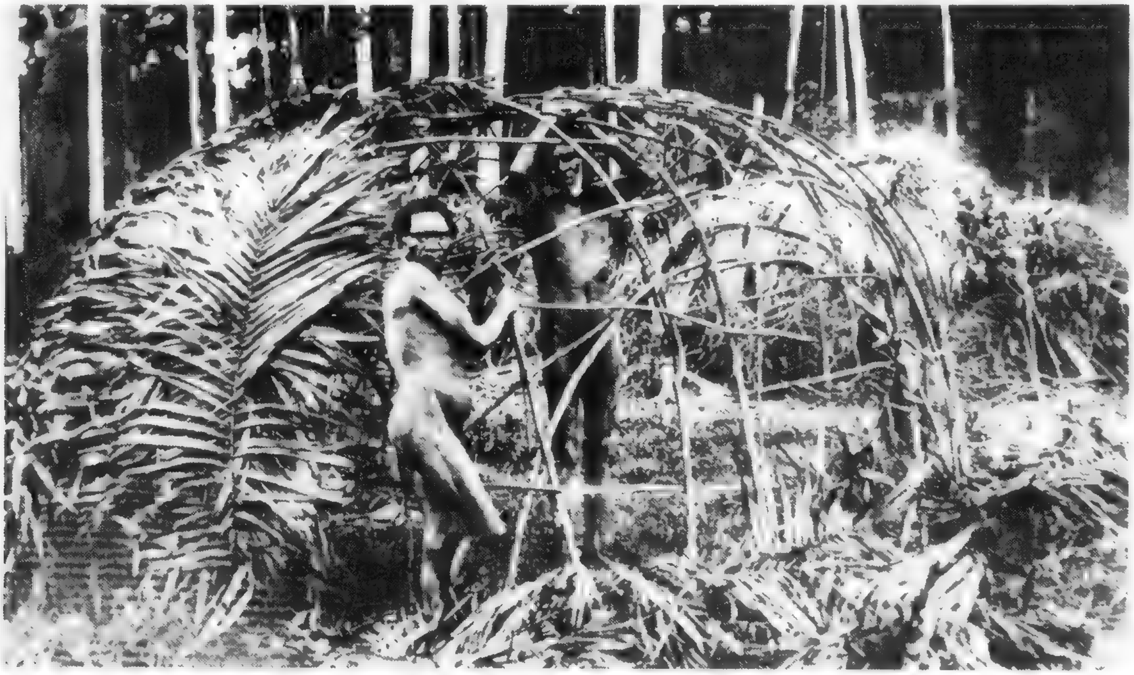
The grasstree was another valuable resource:

"In Western Australia the huts were constructed in less than half an hour by a couple of women. They are usually of grasstree (*Xanthorrhoea arborea*), but paperbark (Melaleuca) was also used. On arriving on the camping ground, the women set to work to collect bundles of dead flowering stems, six or seven feet long, from the grasstrees in the neighbourhood. Then making holes in the ground with their yam-sticks, they planted the stems in them to a depth of some eight inches; the holes were larger at the bottom than at the top, and ten inches apart, in the form of a horseshoe, the heel being the doorway. The stems were made to converge, and on them were placed withered curled grasstree rushes, which were held in position by the hard pointed seed vessels of the stems. The framework was now ready, and the women proceeded to gather bundles of green straight grasstree rushes; holding them under the left arm they threw them with the right hand at an angle of 45 degrees, so that when the sharp points stuck among the covering of dead rushes, the weight of the green stems caused them to bend down and remain in their places. The thatching was begun at the ground and continued up to the top, where a second layer was put on, to render the roof watertight. When the heat of the sun had been on it for a few hours, the roof settled down and became smooth; a third coating of rushes was then put on, and the roof was good for many months, only the top requiring to be renewed."

This expertise in the selection and use of native materials was passed on by example to the early settlers, who seldom acknowledged the source. Stringybark in particular became part of Australian building folklore and is still occasionally used for sheds and huts in parts of East Gippsland, where hundred-year-old bark structures survive.

Although they were happy to investigate and adapt Aboriginal technology to suit their needs, few Europeans realised that Aboriginal houses had (and still have) considerable symbolic significance. In Arnhem Land, for instance, the forked posts, cross-poles and bark sheets of the typical structure are regarded as sacred totemic objects; dwellings recur as themes in Aboriginal paintings, songs and stories just as they do in European culture.

Unlike the new European settlers the Aborigines had a long standing and sympathetic relationship with the land, taking from it only what they needed for survival. Their traditional housing is an extension of the philosophy that the whole environment is the true home — not just the buildings we erect as fortresses against the elements and the world around us. An attitude of trusting Nature rather than fearing it, a vision of harmony instead of exploitation. It's a vision we can all share — to our mutual advantage.



This hut frame in Queensland's Atherton district is similar to huts in tropical Africa and parts of South America.

Farming against the odds

by Sophie Masson

Guyra, New South Wales.

READING the dismal record of Aboriginal-European relations in Australia's history, it is easy to overlook the fact that some Aboriginal families did actually 'make it' in white man's terms. Aboriginal people in the 19th Century founded several enterprises which flourished, and which in a few cases have succeeded to this day. In the New South Wales Ministry of Aboriginal Affairs' excellent book, *Survival* which details the history of New South Wales Kooris, several instances are given of Aboriginal farming enterprises.

At Corranderrk, in Victoria, a group of 80 Aboriginal people began a farm in 1863. Money to set up the farm was hardwon — the Government, although providing land, refused to provide any funds for seed or machinery, so the group earnt the money by working on neighbouring properties. Within 20 years, 1,215 hectares had been cleared and sown, with hops becoming Corranderrk's most important crop.

So successful were the Corranderrk farmers that their hops won first prize at the Melbourne International Exhibition, and they always got the highest prices for their product at the Melbourne market.

Another famous Victorian enterprise by Aboriginal people was at Cummeroogunga, near Echuca. This enterprise was set up by Aboriginal people sick of the autocratic rule of a missionary, Daniel Mathews, who had helped set up a similar farm not far away. In five years the people of Cummeroogunga had cleared 570 hectares, and built 40 cottages and outbuildings.

Wheat was the main crop there, and again the Aboriginal farmers proved very successful, topping the wheat yield for the district year after year. Cummeroogunga was a happy, thriving community with good, well-furnished houses, large vegetable gardens and orchards, a school, church and community hall. Despite their success on white terms, the Cummeroogunga people never forgot their heritage, and each year the whole group would go bush along the Murray River, living on bush foods and learning Law.

Another example of successful Aboriginal enterprise was in South Australia, where a wool washing plant was set up at Lake Alexandrina. Individual Aborigines also took up farming leases in the district, and ran efficient, productive farms which their descendants still operate today.

And at Poonindie mission near Port Lincoln, Aboriginal farmers ran a totally self-sufficient lifestyle for 15 years. Unfortunately, not everyone was impressed by this patent proof that Aboriginal Australians were quite capable of handling their own affairs and enjoying success in their enterprises.

Towards the end of the 19th Century, a new idea began to take hold on Government policy. This was that the Aboriginal race should be forcibly assimilated with the whites — and this was done by separating so-called 'full bloods' from 'half castes', and expecting people of part-European descent to become 'whites'. It was felt that then the 'full bloods' would die out and the 'Aboriginal problem' would be solved. This policy resulted in many hideous consequences for Aboriginal people.

One of them was the kidnapping of children from their families, to be placed in institutions from whence they were expected to emerge trained as servants for the whites. The other was that the successful Aboriginal farming enterprises were often broken up and the land given to white settlers, or else white overseers were forcibly appointed over the Aboriginal farmers. It was the second dispossession.

Survival is available from the New South Wales Ministry of Aboriginal Affairs, 47-53 Macquarie Street, Sydney, 2000.

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In the steps of our predecessors

*"Those Aborigines in the desert, they don't want to live like the white man, ownin' this and ownin' that. They just want to live their life free, they don't need the white man's law, they got their own. If they want water in the Gibson Desert, they do a rainsong and fill up the places they want. If it's cold they can bring the warm weather like the wind. They don't need the white man to put them in jail, they can do their own punishment. They don't have to hunt too hard, the spirits can bring birds to them. Say they want a wild turkey, the turkey will come along, go past them and they can spear it. Kangaroo too. They don't kill unless they're hungry, the white man's the one who kills for sport. Ah, there's so much they don't understand."**

"We were up in central Queensland, there wasn't any water after this bore, we were building shelters for the bulls — they couldn't survive this country without shelter. Just one more crazy project as we tried to stuff up the country. It was horrible, stinking hot. We were behind schedule, the overseer was really pushing us, he was a real mongrel, when one of the blackfellers just put down his tools and started to walk away, out into the bush, in the opposite direction from the bore.

The overseer yelled at him, "Hey, what do you think you're doing?"

The blackfeller looked up. "I'm off, boss."

The overseer gestured at the tools, the half built shelters. "You can't do that!"

The blackfeller just looked around at the bore, the last water we knew about for God knows how long, at the shelters, at the utility and the lousy stores they'd given us, and smiled. "No, you can't do that boss." And he walked out into the bush.

—Anecdote from a friend.

by Jackie French

Braidwood, New South Wales.

WHEN Australians think of farming they think of rectangular paddocks, fences, overhead watering systems, ploughing, whole districts that have been cleared for introduced species. This is our farming — a land re-created almost to destruction.

If this is what agriculture is then Aboriginal Australians didn't practise it. But they did manipulate the land to provide more food than it normally would — both physically and spiritually — and to them the 'spiritual' manipulation was probably equally or more important than the physical.

Many tribes certainly had the knowledge to physically manipulate further if they had so chosen. 'Chop, dig and harvest' farming was known to at least some Aboriginal tribes trading with Polynesia. (I use the term 'Aboriginal' with hesitation and because I can't think of an alternative. It implies that there was one Aboriginal culture, one language, one people, when there were many). The decision not to farm must have been a conscious one — not simply a lack of knowledge.

Even the sparse information we have indicates an extraordinary understanding of local ecology by Aboriginal tribes, such as keeping population levels to the maximum carrying capacity of the land in droughts (a lesson that white farmers ignore as they stock their land to the maximum carrying capacity in *good* years, and claim subsidies when the weather forces them below this). Aboriginal reasons to limit their impact may well be ones we should respect.

Farming originated in the west in marginal areas — places where the climate changed, where more work was needed to supply food. You don't farm in a land of plenty — or a land you understand so that plenty is possible. Westerners have only farmed for about 10,000 years, and by then the Aboriginal tribes had a rich and varied diet and stable lifestyle. Even in the Torres Strait it is the poor islands that do most farming — food-rich islands only farm to supplement their diet. Who wants to farm when you can wander? Domesticated crops can fail and even today, with our food brought to us cold stored from a multitude of climates and countries, we still probably have a less varied diet than most Aborigines. (Count how many different foods you ate today. In the bush even I taste about 20 plants a day, and I probably know relatively few of the edible species around here.)

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**Arthur Corunna, 1893-1950, quoted in Sally Morgan's book,* My Place, *Fremantle Arts Press, $12.99.*

At school we were taught an image of Aboriginal people as 'hunter gatherers' — implying that they just wandered round the Bush picking up whatever was edible and sometimes having a kangaroo hunt for fun. The fact that they didn't farm, in our sense, or build houses, prisons or ammunition factories was held up as proof that they had no control over their environment.

Aborigines believed they did modify their environment and they certainly weren't helpless in the face of Nature. Unlike our society they didn't see Nature as something outside themselves. Many tribes believed that other species relied on human ritual for survival, and certainly there are many ceremonies that imply strong feelings of duty towards the land. (Our rituals, on the other hand, are human oriented. Even Christmas celebrates 'tidings of great joy to all of humankind'.)

Lack of proper rituals and ceremonies were seen as having a severe effect on the land. Other rituals were seen as directly affecting rainfall, animal breeding and other matters of food production. Surely calling down the rain, the warm winds or a herd of roos is a major manipulation for the purpose of producing food. The trouble is, in our mechanistic culture, we have difficulty believing it could happen. Perhaps, with so much less moral responsibility to the world, it's a good thing we don't share such powers. (Perhaps if our relationship with the land was different we might.)

We regard farming as a purely physical activity, exploiting the land for what it can grow. We have no moral traditions about our duty to the land except that it's good "to make two blades of grass grow where one grew before, to make money, to do well". We have no religious duties to the land, no explicit forms of kinship. We have no way of influencing the land except with our hands and our machines. Perhaps, to an Aboriginal person of power 200 years ago, we, not they, would be helpless in the face of our environment.

Only one form of Aboriginal farming — or food-producing land manipulation — is popularly known today. That is 'firestick farming' — burning the land to produce new grass growth to encourage roos, or to move roos to another area for trapping. It may possibly have changed large areas of land, and exterminated many species. Firestick farming tends to be held up as a nice example for white Australia: if the Aborigines changed much of Australia's ecology and exterminated many species, maybe we aren't so bad after all. (The evidence on firestick farming is conflicting. It may have been less widespread than supposed.)

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Kangaroo populations were also manipulated in other ways: large roos were preferred, especially males, so that a disproportionate number of young and female roos were left, and the mob would grow unnaturally quickly. Other Aboriginal tribes diverted streams to encourage cress or pigweed and grass grain growth.

But there is another whole dimension to Aboriginal farming. Food gathering was mostly women's work and until recently Aboriginal women's work has been even less documented than male Aboriginal work. Most early anthropologists and explorers were males — women's lore either wasn't imparted to them, and in many tribes there was a very strict division between women's and men's knowledge, or women's lore was dismissed because it was uninteresting. If you were a bold (male) European explorer you were far more likely to be attracted by a spear-throwing kangaroo hunt or cunning fish traps than by the soft quiet lore of women: how to leave the best fruit always on the bush or tree for better specimens to regrow, how to replant the best yams in places where they would grow well or be convenient for later harvesting. Or how never to clear a pond of waterlily bulbs so there would be more for the next feast, how many wombat berry tubers to take without killing the vine, and so on.

Even in white society it is traditionally men who burn off, manipulate fire on a large scale (at the moment here we have the bush fire brigade burning off all the hills around — all males, working communally, with a dramatic result. I sometimes suspect males like large fires.)

It has been said that the fact that many food-bearing plants grow around native camps — far more densely than in the surrounding bush — was due to the seeds being excreted. But yams are not excreted, and many berries, like wombat berry, need their pulp to germinate, and this doesn't pass through the bowel. This interpretation also ignores Aboriginal lore.

The form of farming practised by Aboriginal women was a quiet one, an inconspicuous but probably very effective way of maintaining and improving the (roughly 70 percent of) diet that the women provided without radically changing or destroying the land.

Aboriginal women were definitely botanists, knowing how plants grew, when they fruited, seeded and how. Many wild food species fruit erratically. Women memorised the exact location of yam plants in case fire destroyed land marks, and used narrow sticks to dig roots and tubers that disrupted plant growth less than wider spade-like implements would have done.

It was the women who carried seeds, fruit and roots and planted them in areas where they might be useful; women who passed on the lore than you never pick the best of any fruit: you left it to seed. It was an old woman who told me how her mother had told her not to take the biggest tuber — big tubers grew better plants for the future.

Perhaps it is that aspect of Aboriginal land management that we need to emulate.

I believe that Aboriginal women — at least in some areas — did farm, did manipulate the land to increase and better the food supply. But we will never know the full complexity of their theory and practice — we can only build on the few anecdotes that are left.

In this area where I live in South East Australia there are very few records of Aboriginal culture and even fewer of their attitude to the land. The records that do survive are usually based around some tangible artifact like shaped stone or bark. (In 150 years there would probably be few records left of our farming either, except the desert and the dwindled species and stunted regrowth bush.) Even old journals refer mostly to staple foods, and not to the countless bits and pieces — fruits and shoots and varied bulbs — that probably also formed part of their diet. The earliest settlers weren't much interested in recording Aboriginal culture and even a few decades later it had changed. Now our stories of 'wild food' and land use come mostly from northern and central Australia. But pre-white Australia was a diverse country, and varied as its ecosystems still are. What was true in the north or centre may have had no relevance here.

Even current lists of edible Australian species don't give an accurate picture of Aboriginal food much less their way of procuring it. Many edible leaves may have been ignored because few tribes used cooking pots (one 'cooking pot' consisted of a leaf-lined hollow in the ground filled with water with hot rocks poked in it, though the woman who told me about that said it was used for medicine, not cooking: the afflicted person put their head into fragrant steam and sniffed. Another Aboriginal way of cooking leaves was to

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heat them between two hot wet rocks).

Many years ago I taught elderly Aboriginal women English, and listened to them — though not nearly as much as I wish I had — about their tribal youth. I've talked to old people here with memories or parents' stories of Aboriginal life, and again the women talk about food and skins and kids and ceremonies, while the men talk of axes, battles, fire and hunting. No one brings up sacred matters unless you ask them — how much of your most personal, deeply felt life do you share with strangers?

So I end on a plea: to follow in the steps of our predecessors. To establish spiritual or moral relationships with the land as well as physical ones. To accept that we have duties towards the land just as we expect it to provide for us. To study the relationships of the world around — not to stay in our European tradition of seeing each crop in isolation — a paddock of wheat, a bed of tomatoes — but to see the incredible complexity and diversity of a system you can work with and harvest and be part of.

Useful native species

Early white Australians regarded native foodstuffs as survival foods — to be eaten only under threat of starvation. Later, more systematic sampling yielded foods which could be improved but even our native 'success story', the macadamia, was improved in Hawaii, not here. It has only been in the past decade or so that the fashion has changed to consider improving native species for domestic use. Ironically several native species occurring here as well as elsewhere are cultivated in other countries — New Zealand spinach, taro, water chestnut. Others, like native water cress, native mints and some native figs, are often supposed to be introduced when walkers find them in the wild. We still distrust out country, and its ability to provide.

For my own part I use native species extensively in my garden and orchard — not to eat but to supply food and habitat for the predators who control my 'pests'. (This is yet another subject — one I hope to cover in Earth Garden soon).

While I am walking in the bush, though, I 'eat native' — mostly because I like to walk with my hands and body free. But at home, even surrounded by the bush available for harvest, I use the domestic species in my garden. They include the following list: wombat berries, nettles, kurrajong roots and seeds, native cherries, raspberries, fern and bracken roots and shoots, cutting grass seeds and roots, rush and cranesbill roots, orchid tubers, native oxalis, plantain, pigweed, figs, sugary viminalis sap and angophera flowers and hundreds of others. They are either easier to grow, or produce a bigger harvest, and their tastes and textures are the ones I grew up with.

The following are some plants that already grow as ornamentals in our gardens, and could be used, as well as a few native species that could be grown for use. (Please don't search for native edibles in national parks — we have so little wild land and so many people that we need to minimise our impact on it). I give them with some reservation. We have so little feeling for our land that we call all Australian plants 'native' and plant them anywhere at all about the country: Victorian mountain plants in suburban Perth, Western Australian wildflowers growing in Sydney. We water them with sprinklers and feed them with complete plant food. We have lost the feel for the local ecosystem that Aboriginal people had. We have certainly lost the sure sense that our moral, religious, social and economic life is bound to our relationship with the land.

Sugar wood (*Myoporum Platycarpum*)

We are used to using maple syrup, the sweet sap of a North American tree. Many Australian species also have sweet sap. Even common viminalis isn't bad, and kids will chew many wattle gums instead of lollies (wattle gum can also be made into a 'jelly' with fruit juice — it isn't bad).

The Australian sugar wood is a small dry country tree over eastern mainland Australia. It has slender drooping branches. A white manna is exuded from the trunk after wounds from insects or humans, and the sap exuded eventually hardens into very sweet icicles. Suck it as a sweet, use it to sweeten drinks, or heat it up in milk. It has also been fermented into alcohol.

Quandong (*Santalum Acuminatum*)

This native tree grows in all States, and is often grown as an ornamental. The fruit can be eaten fresh or stewed; it makes good jam. Pick it when it starts to fall from the tree. The tree is a partial parasite and needs a good host tree. Plant it in the middle of other bushes or near other trees.

Lilly pilly, Eugenia (*Syzygium*)

This is a small native tree, often in gardens or footpaths, well shaped with young foliage which is frost tender (but otherwise survives light frost, especially if grown under the shelter of larger trees). It needs moist soil. The flowers are white and the berries range from green to blue to red depending on the cultivar.

Lilly pilly fruit ranges from edible to tasty — like most trees not selected for their fruit, the quality varies. Try to find a lilly pilly tree with really good fruit and graft it onto yours to improve the crop. Even at its least tasty, lilly pillies make excellent chutney: use an apple chutney recipe, substituting half the quantity of lilly pillies.

Native figs

All native figs are edible and a few are palatable and sometimes really good, including the common Moreton Bay fig and Port Jackson fig. The best Port Jackson fig here grows over a swimming hole: you swim and eat at the same time. But the fruit of other trees nearby is cardboardy. The figs should be eaten very ripe and purple. Some trees seem to produce better figs than others.

The figs from the **sandpaper fig** *(ficus coronata)* can sometimes be very good indeed. The fruit grows to about 3 cm long, and is eaten when nearly black and soft. The hairy coating needs to be brushed off first, or the fig peeled. Sandpaper figs need an area with no or only light frosts, plenty of moisture and reasonable shelter.

Bunya nuts *(Auracaria Bidwilli)*

These should be grown more widely. They are wonderful and incredibly versatile, and probably the only reason they are not more widely grown is their size: the tree can be enormous although they can also be pruned to a more manageable size.

The bunya pine is a tall wide, native tree, extremely imposing. It grows slowly, fruiting only after 10 to 20 years, and may not fruit every year. It can be grown wherever you can grow a lemon tree.

The bunya pine produces enormous pine cones, up to 12 kilos, with the nuts, up to thumb size, contained in the cone. You'll need a hammer to husk them and probably gloves, as the cones are sticky inside.

An easier way to remove the nuts is to drop them in a hot fire (the way we did as kids) and wait till the first seeds start shooting out. Pull the cone from the fire and rescue the rest of the fruit. Alternatively try the process in the oven at about 200°C for about ten minutes. If you hear a nut explode take the cone out at once.

Using bunya nuts

Bunya nuts can be eaten straight from the cone or roasted in the oven. I have tried them fried in a little oil with garlic — very good — or ground black pepper.

Bunya flour is made by boiling the nuts in their husk for 20 minutes, then hulling them, drying them and grinding them. Use the meal like almond meal for cakes and pastry. Bunya flour added to bread makes it wonderfully rich, and marzipan-like biscuits can be made from fried fruit and bunya meal. To store bunya nuts husk them, dry them in the sun for a day, then place in sealed dry jars till you need them. Or store the cones in a dry place where the rats can't get them.

Growing bunyas

Bunya trees are either male and female. Ostensibly you need both to produce nuts, though I have known females to bear when there is no male in the vicinity. Grow the trees from seed, patiently, they take about a year to germinate. The seed should be planted point down in moist soil and kept warm. The trees quickly develop a long tap root, so allow for this when you are planting out, and transplant carefully.

The young trees are prickly, and stock usually leave them alone, but they can be knocked back by frost and some protection is needed for the first few years in frosty areas. Make sure the young trees are kept moist and free of weeds and grass: they grow in the wild in the bare ground under a parent tree and you should try to duplicate this.

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Condiments

Native pepper

There are at least two native species of pepper. *Piper novae hollandiae* is native to subtropical Queensland and Northern New South Wales rainforests, and *P rothianum* is native to Queensland tropical rainforests. They are both climbers, with ovate pointed leaves and eventually form thick 'monkey ropes'. The fruits are red, round, about 4 mm across, and are born on slender stalks in thick bunches. They are reputed to be edible. Soak the fruit in water till the flesh can be rubbed off, dry the seeds in the sun for several days till brittle, and grind like pepper.

The **mountain pepper bush** (*Tasmannia lanceolata*) is native to Tasmania, Victoria and New South Wales. It can be very attractive, with long leaves and bright red young branches. The leaves and the fruit can be dried and ground as a 'red pepper' alternative. The fruit is very hot.

The related **native pepper tree** (*Tasmannia insipida*) is a rainforest shrub, less hardy than mountain pepper and native to Queensland and New South Wales. The fruit should be soaked in water and the flesh removed, the seeds dried and ground for a very hot 'red pepper'.

Native ginger *(Alpinia Caerulea)* grows on the fringes of rainforest. The whole plant has a ginger flavour but the young growing tips of the underground stems are strongest flavoured. Native ginger also has edible blue fruit, but edible is the operative word, rather than tasty.

Native ginger syrup

Take 500 gm of the young shoots, chop them finely and simmer in half a litre of water for half an hour. Strain, add a cup of sugar for every cup of liquid, and reboil till the mixture is thick. This syrup can be used wherever you would use ginger in cooking.

Native mints (*mentha*) shouldn't be confused with the mint bush, *Prostantherea*, which, while fragrant, is slightly acrid too and scarcely suitable for dabbing behind your ears. The native mints are all ground covers, either matting or growing to about 40 cm. Like the European and American mints they can be used for mint sauce or salads or fruit salad; infused in brandy and sprayed around a room in an old fashioned pump fly spray to perfume the house; added to rinsing water to scent your linen or rubbed on the temples if you have a headache.

Nutmeg substitute

While nutmegs are strictly a tropical crop, the dried powdered leaves of the native *Backhousia myrtifolia*, otherwise known as the never break tree, can be used as a substitute. These grow wild in the fringe rainforest gullies around here. They need good soil and moisture and protection from heavy frost. During droughts they become defoliated; however they grow back as soon as it rains. They are a medium sized, small leafed tree with tiny white flowers and would look lovely in a sheltered corner of a garden. They respond well to pruning.

Nettles (Urtica sp)

Most nettles you see will be introduced. Native nettles are smaller and can be used the same way. Nettles are unpleasant things to have in the garden unless you are sure no one will brush against their stinging leaves. (If they do, rub the juice from the nettle stem on the rash to relieve it, or some bracken stem juice.) But if you don't happen to have a meat stock on hand try boiling a handful of nettles (use gloves to pick them) in a cup of water for 20 minutes. The taste will be similar to beef stock. Boiled nettles can be used as a green vegetable — they won't sting your mouth. Use young ones for this, the older ones are stringy. Boiled nettle leaves taste like boiled nettle leaves. Some people like them.

Nettle beer

Take a kilo of nettle leaves, a teaspoon of ground ginger and the peel of two lemons and bring to the boil in 4.5 litres of water. Simmer for 20 minutes, add 450 gm of brown sugar and 25 gm of cream of tartar. Stir, cool, transfer to a clean bucket, and add the juice of two lemons and a teaspoon of dried yeast. Cover with a couple of clean towels and leave in a warm place for three days, then in a cool place for two days. Strain and bottle but don't seal — just rest the tops on the bottles. Screw them down only when fermentation has finished, then drink it within a week. Nettle beer doesn't store well.

Spinning nettles

Nettles can also be used for making linen (see the fairy tale Rumplestiltskin). The cloth isn't as fine as when flax is used, but is good for brocades and other thicker cloth. Use the stems of the nettles, not the leaves, and choose the biggest bushes you can. Lay them in water till the flesh has rotted off, rub then clean and dry, then spin as you would wool to make a strong fibre.

Native teas and coffees

Leptospermum tea

The 'Australian' tea is made from the lemon-scented tea tree, *Leptospermum petersonii*, named by Sir Joseph Banks when he was experimenting with native substitutes for tea. Tea tree tea is remarkably similar to lemon-scented China tea and the two can be combined. Use leptospermum leaves fresh or dried in the sun.

Baeckia tea is made from the leaves of the alpine *Baeckea gunniana*, or mountain heath myrtle, or *baeckea virgata*, found over most of eastern mainland Australia. It is similar to leptospermum tea and quite pleasant.

Callistemon tea is made by adding a few bottle brush leaves to ordinary tea. It's good, but should be drunk black.

Hardenbergia (*Hardenbergia violacea*) tea is made by adding a few hardenbergia (sometimes known as purple coral pea or false sarsparilla) leaves to ordinary tea. Like bottlebrush tea it's best drunk black. It's fragrant and slightly sarsparilla flavoured. Pure hardenbergia tea can be made in the same way as ordinary tea, using either fresh or dried leaves, but you will need at least double the quantity of dried leaves that you would normally put in the pot for a good brew. It will taste quite strongly of sarsparilla.

Coffees

All 'alternative' coffees should be made as soon as they are roasted and ground for the best flavour. One of the reasons coffee is so popular is that it retains its fragrance for a long time. Many people who find coffee substitutes insipid like them when they are fresh — just as stale bread has no resemblance to bread from the oven.

Lotus coffee

This is made from the roasted ground seeds of the sacred lotus, *Nelumbo nucifera*, a subtropical waterlily. Use the same method as wattle coffee. See above.

Kurrajong root

Clean the roots thoroughly of any dirt and grit; peel if possible (there is no need to peel them if they are thin and tough) and bake in a slow oven till dry and brittle. Pulverise in a blender or grind. Kurrajong makes a pleasant, slightly sweet nutty coffee. You will need to use about three times as much kurrajong coffee as normal coffee for a good rich drink. Keep kurrajong coffee fresh in an airtight jar or by freezing it whole or ground and taking it out when needed.

Part II of this article will appear in the next issue of Earth Garden.

Report from Hownotto: roofing

by Dr Robert Rich

Healesville, Victoria.

HOWNOTTO is a very unusual place. In some ways it is just like Australia, but there are subtle and unexpected differences wherever you look. I recently spent some time there, and very educational it was too.

Naturally, I was particularly interested in building, so I was very happy when Jan and Jack, a young owner-builder couple, invited me to help with putting the roof on their house. They taught me lots of new tricks, which reduced the amount of labour necessary in many ways, and at the same time led to a more interesting house.

Their roof was "Colorbond" corrugated iron, held down with roofing screws to rough sawn hardwood (eucalypt) battens. As I said, Hownotto has great similarities to Australia. But when I looked around the building site, I noticed the difference. "What's that?" I asked, pointing to a big tangled pile of timber scantlings.

"Our roof battens," I was told.

Now, at home, we buy green hardwood just before it's used, to reduce warping and bowing. If it must come early, it is carefully stacked into a solid pile, then covered with plastic to reduce drying. Jan and Jack laughed when I explained this.

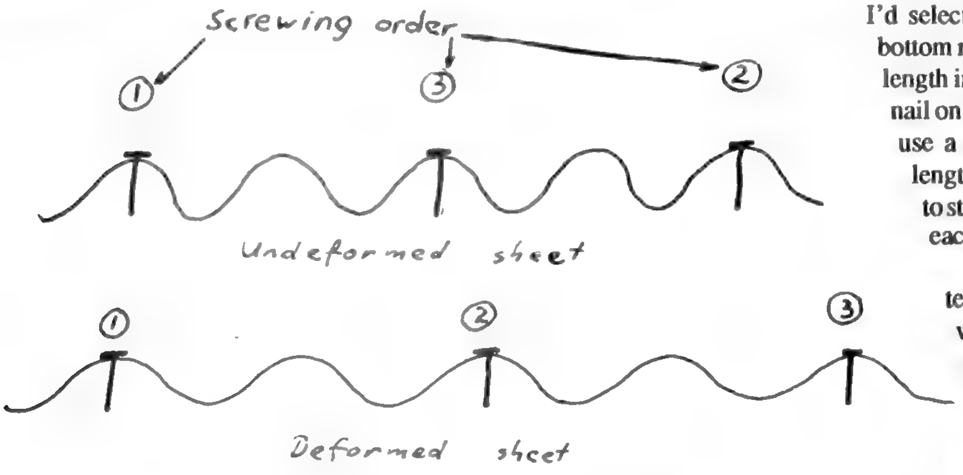
"Straight lines are so sterile. I hate the look of a roof with the screw heads all lined up like soldiers," explained Jack.

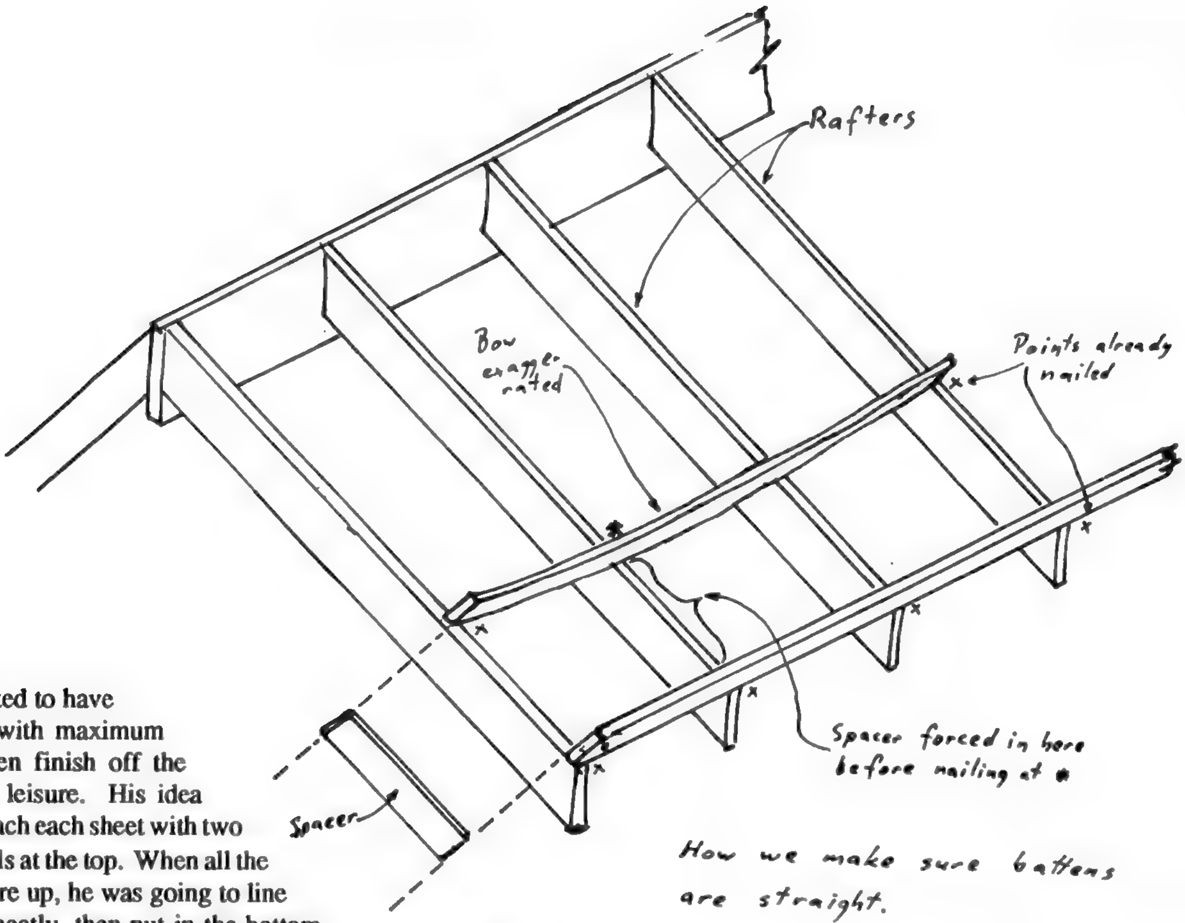
"But the holes in the tin will keep missing the battens!"

Jan grinned. "That's what silicone sealant is for. And as a free extra, you get tiny little skylights into the roofspace!"

This was worth learning. Such a saving of work! Previously, when I nailed on roof battens, I'd select out the straightest bits for the bottom run. On successive runs, I'd put a length in place with the bow downwards, nail on the ends at the right spacing, then use a short bit of timber of the right length (spacing less batten thickness) to straighten the bow before nailing to each rafter.

Well, we nailed on the battens, and even Jack was pleased with the artistic, free form appearance of the roof. Then we struck a problem: they had conflicting ideas on the strategy for attaching the sheets of iron.





How we make sure battens are straight.

Jack wanted to have it all on with maximum speed, then finish off the details at leisure. His idea was to attach each sheet with two 4 inch nails at the top. When all the sheets were up, he was going to line them up neatly, then put in the bottom row of screws. Then he'd come back and put in all the other rows of screws, except for the very top one. Those were to go in with the ridge capping, thereby saving quite a few screws.

This seemed very clever to me, but Jan violently disagreed. "It's quite unsafe. You know the kinds of winds we get up here! If the manufacturers recommend a screw every second corrugation top and bottom, and 5 screws per run in between, then that's what we should put in — straight away".

In the end, they agreed to disagree. They decided to do one side of the house each. I was to be 'the gopher', passing up sheets of metal and other materials needed.

Jack certainly covered his side of the house fast. All the tin was up, hanging on two nails each, neatly parallel, and all the bottom screws in (into every second corrugation) by the time Jan had completely attached five sheets. Then it was time for us to knock off for lunch.

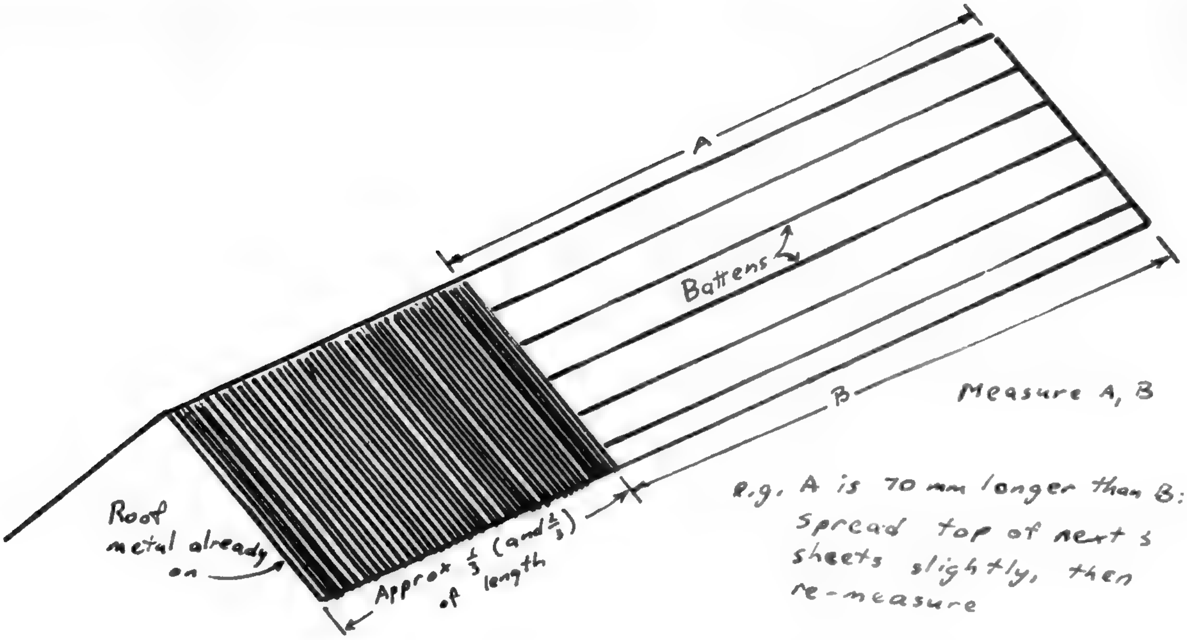
Unfortunately, a sudden windstorm blew up during lunchtime. Fortunately, only three sheets were wrecked beyond repair, but it took the three of us the rest of the day to remove and panel-beat sheets, and to put them back on Jack's side. To give Jan credit, she didn't gloat or voice words of reproach, but I did catch her casting proud glances towards her five solidly attached sheets.

However, I felt I had to question her on one point. She'd start each run of screws at the left hand edge of the sheet, and proceeded across to the other edge. I have been taught that this is bad because the sheet is distorted and flattened. At home, I'd put in one screw top and bottom, through the overlap with the previous sheet. Then, putting just enough pressure on the sheet to have the bottom of each corrugation touching, but not enough to distort the sheet, I'd put in one screw top and bottom into the right location just before the overlap with the next sheet. Then I would put in the intermediate screws for the top and bottom runs. The other runs were usually put in after the whole roof was covered.

That's not all. Even with this screwing order, I was told that it's good practice to do checks at the one-third and two-thirds points along the roof: measure from the edge of the last sheet fitted to the other end of the roof, to see if top and bottom are the same distance away from it. Usually they are not, and you have to apply a bit of pressure on the more distant edge of the next few sheets to equalise. This means that the last sheet will be nicely parallel with the gable edge.

Jan was not impressed. "You seem to do a lot of unnecessary mucking about in Australia," she said. "You can line things up over the last three sheets."

So she did, when she came to the end of her side of the roof. Unfortunately, this meant that the corrugations of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Battens
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Measure A, B
e.g. A is 70 mm longer than B: Spread top of next 5 sheets slightly, then re-measure
Roof metal already on
Approx $\frac{1}{3}$ (and $\frac{2}{3}$) of length

a couple of sheets had to cross, but a few belts with a hammer compressed the hidden part of the sheet on the bottom — the dents didn't show — so that the screws went in okay.

There was one more new trick Jan and Jack taught me. In Australia, we drill holes for the screws. I use a roofing punch to make a little dent so the drill bit point won't skate around. Jan and Jack saved a lot of time and effort by dispensing with the drill altogether: they just made the holes with a roofing punch. I always thought that this was asking for leaks around the screws, but I didn't even have to ask. That's what silicone sealant is for!

One day, I hope to return to Hownotto, and see how my friends' roof is standing up to their famous winds and high rainfall. When I do, I'll let you know.

. . . ENERGY PULSE . . . ENERGY PULSE . . .

by Chris & Rhonda Martin

Coonabarabran, New South Wales.

We have been using a set of Century PG613 batteries for the past four years for lighting only and have experienced satisfactory service as far as their power output is concerned.

However, they appear to have developed a dangerous safety hazard in that the cases in two of the four batteries have cracked. This has dumped acid everywhere. In our case we were lucky that the acid leaked onto a cement floor and could be mopped up without much damage. We know of at least two other instances where these batteries have split. One neighbour was not so lucky as they had stored their batteries in a loft and they had leaked through a ceiling.

They wrote to Century about the problem and were more or less told that they were fortunate to have the batteries last three years. In August this year we supplied a battery, that showed signs of cracking, to a company representative for testing but have not had any assessment of the battery from the company yet.

As far as we are concerned there is no argument with the power output but there is something dangerously wrong with the strength of the battery casings. We would recommend that anyone still using these batteries place them in a container in case they split. We contained our two remaining batteries in the plastic bottles that held the acid. These are just the right size and can be adapted by cutting out one long side of the bottle. This spare face was then placed vertically at the back of the battery — this is where they split.

•When Earth Garden contacted Century about the problem this week, the General Manager, Mr Bill Dainton, told us that this model, which has a polystyrene case, is not recommended for use with solar energy systems, but is okay for diesel or wind generators. This is the first time we had heard such information and we are very sure there is a communication breakdown somewhere between the manufacturer and the battery suppliers (retailers) — this information is not getting out to customers. In the case of Chris and Rhonda Martin, this is the second time they have been sold batteries which are not suitable for solar home energy systems.

Mr Dainton was genuinely concerned about the possibility of casings splitting and backed up Chris's suggestion for containing the batteries. He did however, mention that this is not a complete solution and suggested that readers seek information about more appropriate batteries.

The Buddhist farmer — models

Bringing in the herd
to milk.
Dawning's mist
enshrouds the leading cow,
Old Faith.

by Leigh Davison

The Channon, New South Wales.

I'M A sort of a farmer. Not a real farmer though. Real farmers make lots of money from farming . . . or lose lots. I make a little from farming and grow most of my own food. I'm a subsistence farmer. My wife and I live communally with three other families on 260 acres of degraded farmland. We farm 60 of those acres together and help the other 200 to return to the way they were a century ago. Rainforest mostly.

Old Faith is our head cow. She's 18 years old. That's old for a Jersey cow . . . or any cow. We still milk her. She's in calf again. Went to the bull last month. Our bull, Young Burt, is less than two years old. Age differences don't worry Jersey cows the way they worry people. They certainly don't worry Young Burt.

I'm a mathematician too. Not a real mathematician though. I give lectures to college students. I'm a part-time lecturer . . . very part-time. I used to be a real mathematician. Real mathematicians work with things called mathematical models. I once spent four years developing a mathematical model of a ship's hull . . . on an IBM computer. The nice thing about a mathematical ship is the fact that nobody drowns when it sinks.

After I sank my last ship I started growing potatoes . . . on a UNIVAC computer. The nice thing about mathematical potatoes is that they don't get blight, or wilt . . . unless you put a disease routine into your model. Our potato model had no disease routine. It didn't even have an organic matter routine. That upset me.

I had an organic garden in the backyard of my flat. I composted my kitchen scraps. The other guys on the potato model team, the chemists and biologists, said: "We don't need an organic matter routine in our model. This is a macronutrient model."

About that time I decided that maybe there was more to life than models. So I became a farmer . . . but not a real farmer . . . and I got married. I was right, there is more to life than models.

I've been a sort of a farmer for some nine years now. And although I'm mostly involved in the day to day problems of subsistence farming I still use models, though not necessarily computer models. Everybody uses models.

* *

One model that conditions my thinking strongly is that of our planet as a closed system, a system in which virtually nothing enters or leaves save solar radiation. My model for a sustainable planetary agriculture is a system which runs on nothing but incoming solar energy and on nutrients derived from natural biological regeneration.

Modern farmers, real farmers that is, use a lot of fossilised energy and non-renewable highly soluble nutrients in their systems. They do this to make money. However, in farming this way they often trade off the long-term ecological viability of their farms against the short-term economic imperative of maintaining a cash flow. Even so, in an average year, 30 percent of Australian farmers suffer a negative income. They lose both ways. They lose money and they lose soil. When you lose topsoil you lose the basis for a sustainable agriculture.

Remember the old game "Animal, Vegetable or Mineral"? What's the answer for topsoil? Is topsoil animal, vegetable or mineral? Here's the answer. Roughly 94 percent by weight of fertile topsoil is mineral material. Roughly five percent is humic organic matter or dead animal and vegetable material, and one percent is actually living. This live one percent contains a multitude of microscopic lifeforms both animal and vegetable.

One gram of fertile topsoil (that's about the amount that would fit on an adult's thumbnail) contains roughly five billion living organisms. That is five billion sentient beings. One gram of topsoil contains as many sentient beings as there are humans alive on the Earth today. If managed sympathetically good topsoil has the capacity not only to renew and maintain its fertility indefinitely, it has the capacity to regenerate, that is to improve its fertility.

In the nine years since I left the computer lab, the potato modellers have included an organic matter routine in their nutrient model. The old over-simplified macronutrient model has been subsumed under the more comprehensive 'organic' model. This new model acknowledges the importance of organic matter as a substrate for soil microfauna and microflora and as a buffering medium for nutrients. This model is starting to trickle down to farmers in the field. They are now told that soil organic matter is important.

Though many farmers would like to dance to the tune of the new organic model, they can't. There's a louder tune playing. This is the tune that we all dance to. It's the tune of growth economics.

* * *

The doctrine of 'increasing affluence through growth' is the unchallenged economic pacesetter for governments of all political persuasions. This doctrine demands that national economies grow by two to three percent every year or be considered as international economic basket cases. It used to be fun to dance a little faster each year. Faster by a few percent. After a while it gets hard to keep it up though. After a while dancers start to drop out from exhaustion. After a while a finite planet will run out of the resources needed to fuel continued economic growth. Long before that time, however, irreversible damage will have been done to vital life support systems such as the ozone layer, tropical rainforests, and of course, to topsoil.

The doctrine of economic growth is a model. It is an unsustainable model. The fact that it is unsustainable may not mean a lot for people of our generation. It will mean more for people of our children's generation. It will mean heaps for the people who will be here in 100 years' time. What will be left for them? Will we leave enough resources for them to start moving towards a sustainable economy if they so desire? Will we give them that option?

This is a point of ethics. It broaches the question of what the British green activist, Jonathon Porritt calls 'the principle of intergenerational equity'. I have a model for this principle. It was handed down to me by my old scoutmaster. "Chaps!" he would say at clean up time after a scout camp. "Chaps, we have to leave this place in better shape than we found it." What he meant was that the next people to visit that spot should have the right to get as much fun out of it as we did. One day I heard him say that there were some scout troops who didn't clean up so well after camps. They left the place in worse shape than they found it.

The increasing tempo of the tune of 'affluence through growth' ensures that we will leave the planet in a mess for our successors.

* * *

So our planetary economic model is unsustainable. Too bad! At least we're enjoying ourselves. At least we're meeting all of our needs . . . aren't we?

The Chilean economist Manfred Max-Neef has identified nine basic human needs. These are the needs for subsistence, protection, creativity, participation, identity, love, understanding, leisure and the need for freedom. Some of these needs are needs of having, others are needs of being. In a materialistic culture like ours we emphasise the needs of having. Satisfaction of these needs of having is what is placing unsustainable demands on the planetary resource inventory. In less materialistic cultures, and in 'poor' societies where people are forced to work together in groups to meet their need for subsistence, needs of being like the needs for participation, identity and creativity are usually better met than in our own affluent society.

Max-Neef concludes that, quite ironically, people who are poor in the narrow sense (as measured purely by satisfaction of needs of having) are often quite wealthy in the broad sense (as measured by satisfaction of needs of both being and having). There is clearly a need for the adoption of a needs model which acknowledges all nine human needs. Current mainstream models, of course, are restricted to only those needs and satisfiers which can be measured in terms of dollars and cents, that is, to needs of having.

* * *

Seven years ago I read a book by a Japanese farmer named Masanobu Fukuoka. In his book, *The One Straw Revolution,* Mr Fukuoka proposes an agricultural model in which the soil is not disturbed: "The earth cultivates itself naturally by means of the penetration of plant roots and the activity of microorganisms, small animals and earthworms." For seven years I have been growing sweetcorn and pumpkins in plots where the soil is not disturbed. For the past three years I have also been growing zucchini and potatoes in accordance with Mr Fukuoka's 'no-dig' model. I believe that Mr Fukuoka is right.

When people ask me: "Why don't more farmers farm without turning the soil?", I answer: "Because everyone knows that farmers have to plough."

* * *

For four years I have been farming biodynamically. Biodynamics is a system of agriculture presented to us by the Austrian teacher Rudolph Steiner. In this system minute quantities of certain specially prepared substances are applied to agricultural soils. These substances act at a subtle level to enhance the activity of the live one percent of the topsoil.

Conventional dairy-farmers apply large quantities of expensive nutrients like, for example, nitrogen in a highly soluble form like urea, to their pasture. Heavy applications of urea kill the one percent of living microorganisms in the soil and burn up the five percent of organic matter leaving nothing but the mineral component.

Biodynamic farmers, on the other hand, apply minute quantities of a triflingly cheap substance called '500' to their pasture. This substance stimulates biotic activity in the soil thus releasing nitrogen to the plants as they need it. There are many successful biodynamic dairy farmers in Australia. I know of only one commercial biodynamic dairyman on the New South Wales Far North Coast, however. He has been farming biodynamically for 14 years. In that time he has not had to apply one bag of fertiliser to his pasture. Why don't other dairymen in this area follow his lead? Why don't they shift to the new model?

If Galileo were alive today he could have helped us to answer this question.

When Galileo built the first telescope and showed that indeed it was the Earth that revolves around the sun and not vice-versa, the Pope was not able to see it that way. The Pope liked the old model which put the Earth at the centre of things. The Pope had several good reasons for sticking with the old model. Not the least of these reasons was the fact that he had been saying for years that the Earth was at the centre . . . and of course everybody knew that he was infallible. His infallibility was on the line. So for the Pope and his hierarchy there was more to deciding on which model of the solar system was correct than mere hard evidence. They decided to stick with the old model. They also excommunicated poor old Galileo for good measure.

Today's agricultural establishment has several good reasons for sticking with the old model of soil fertility. For one thing no one makes any money from fertiliser sales if soil fertility can be maintained merely by applications of a triflingly cheap substance in conjunction with intelligent farm management. For another thing members of the agricultural establishment don't understand the biodynamic model which is based on Steiner's holistic philosophy of anthroposophy. Holistic sciences look at whole systems. Western science pulls systems apart and looks at the parts. Western science is reductionist. Most dairy farmers today get their information from the agricultural establishment. The agricultural establishment knows that nitrogen in a soluble form like urea makes grass grow quicker. And so it does . . . for a while.

* * *

Earlier on I mentioned rather glibly that I moved my situation from university to farm rather suddenly. Forgive me if I gave the impression that this transition was made easily, it was not. The leap from growing spuds on the computer to growing them on the farm was made with no small amount of fear and trepidation. A book that helped me to make that leap was *The Seven Laws of Money*, by Michael Phillips.

As I recall, Phillips' First Law (of money) went something like: "Do the thing that is fun for you, the money will follow naturally". What Phillips is saying, I believe, is that people enjoy being around other people if they are having fun. A business or enterprise that manifests a sense of fun as well as a sense of purpose will attract energy and customers. For me organic gardening in my backyard had become more fun than the abstract computer models that I'd enjoyed for so long. The way ahead seemed clear. Wasn't it the Third Patriarch (of Zen Buddhism) who said "Trust in the heart"?

Michael Phillips is associated with the Briarpatch Society in San Fransisco. This is a network of small businesses having in common the values of 'openness, sharing, and serving people through business'. The Briars, as they call themselves, claim they are in business for three reasons: (1) They love it. (2) They find their reward in serving people rather than in amassing large sums of money. (3) They enjoy sharing resources such as business experience and skills with each other.

They are pioneering a new model for the relationship between human beings and their work.

* * *

My own personal economic model came from a book by the Sydney based sociologist Ted Trainer. In the last chapter of his book, *Abandon Affluence*, Trainer proposes a sustainable economic model based around what he calls a 'neighbourhood economy' consisting of small numbers of family units. In this neighbourhood economy resources such as tools, and equipment, farm animals and garden space, are shared. People spend five days per week in their neighbourhood, working and playing (Trainer has coined a new word 'workplay') to meet basic needs, and only go out to a paying 'job' one or two days per week to make money for the few items that they can't provide for themselves. In working together thus to meet their needs of having they also meet many of their needs of being. Under this model people spend most of their time in activities directly related to their own welfare. Under the mainstream economic model people spend 50 percent of their waking hours either at, or commuting to and from, a job which most likely satisfies none of their needs directly. Under this mainstream model needs are satisfied indirectly via the medium of money.

After reading *Abandon Affluence* I realised that our own small community is in effect an example of Trainer's neighbourhood economy. Having a conceptual model of what we're doing here has helped me to realise the significance of the social-economic experiment that we are conducting. Previously my energy had been focused exclusively on the agricultural experiment.

In time, I believe, the current organic model of soil fertility will be subsumed under a more comprehensive biodynamic model, just as the macronutrient model was encompassed by the organic model. The job of shifting agricultural paradigms will be done mainly by farmers and other specialists.

The job of shifting economic paradigms, on the other hand, is everybody's business. Yours and mine. The shift to a sustainable, humane, nurturing, enjoyable economy that meets the full range of human needs starts now, has in fact already started.

So what can I do to help the shift? I can start by looking at my models. What model do I have of my relationship to work? Do I have a job that provides money and nothing else? Could I find a situation in which my needs for creativity, participation and even leisure are met along with my need for money? If not, could I create such a position?

What model do I have of my relationship to the planet. Do I see myself as nurturer or as a producer and consumer? Am I making an effort to plug into regenerative, sustainable cycles or am I just using up non-renewable resources? Am I going to leave the place in better shape than I found it?

When enough models are changed the world will change. We have that power.

* * *

As a student I remember seeing a picture of the young Lenin, sitting at a table, pen in hand. No doubt he was planning the Russian Revolution or some equally momentous event. How I envied him his reason for living! At that time (the early sixties) all the causes had been fought for and won, I thought. In searching for a purpose in life I sometimes romantically find important reasons to be alive like 'subverting the dominant economic paradigm' or 'saving the topsoil'.

Saving the planet's topsoil is probably a bit like 'saving all beings'.* Either they can't be saved, or they're already saved . . . or both. It's a task too big to contemplate. Saving the topsoil on our farm? Well that's different. After nine years I'm getting familiar with it, learning how to work with it, how to be kind to it, how to have fun with it. I'm learning that I feel lonely when I'm away from it. Like Mr Fukuoka, I've discovered that the best thing you can do for topsoil is to do nothing, to leave it alone. Saving topsoil amounts to letting it do its own thing. It can't be saved. It already is saved.

Over the years we've had lots of people come to our farm to check out the place. Perhaps they had heard that there was a thing happening here that interested them. At first it was alternative lifestyle people from the permaculture groups: "Heard you were into Fukuoka, biodynamics, communal living, kundalini yoga, composting toilets". Later on they were joined by little old ladies from the garden clubs: "What's all this about organic gardening?" More recently there's been a trickle of different visitors. "Hear you don't use urea, don't spray your bananas . . .? Big men mostly, in big hats. They sometimes talk about their big bank overdrafts . . . Real farmers.

* * *

Leading out the herd to graze, pale sunlight shows Old Faith and me the way.

* * *

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References

1. Porritt J, 'Politics and the New Economics', in *The New Economic Agenda*, Findhorn Press, Forres, Scotland, 1984.
2. Max-Neef M, 'Reflections on a Paradigm Shift in Economics' in *The New Economic Agenda* ibid.
3. Fukuoka M, *The One Straw Revolution*, Rodale Press, Emmaus, 1978.
4. Phillips M, *The Seven Laws of Money*, Random House, 1974.
5. Trainer F E, *Abandon Affluence*, Zed Books, London, 1986.

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* A reference to the first of the four vows of Zen Buddhism, "Although sentient beings are numberless, I vow to save them all".

— Fostering A Calf —

by Marja Fitzgerald

Upper Mongogarie, New South Wales.

IF YOU have a house cow you may want to make a little money by fostering a calf onto her. It's easier than hand-rearing, and healthier for the calf.

Some cows accept foster calves readily. Occasionally cows will accept an extra calf while they still have their own, while a few may never accept a strange calf.

Young calves can be bought from the saleyards and sometimes from dairies. When you buy your calf, put a calf collar on him straight away. A collar makes it easier to catch and handle. You can clip a lead rope or chain onto the collar when necessary. Chains are preferable for tying up because they don't cause rope burns and they're harder to tangle.

On the day you buy your calf prepare your car. Put a waterproof layer, such as fibre bags and newspaper, on the bottom. Cleaning your car afterwards will then be easier. When you bring your calf home, put him into a smallish enclosure with shelter, or chain him up where he can reach shelter. The calf needs to be where your other large animals can't get at him but can see him, so they can get acquainted before they interact. This gradual method reduces later hassles, though it doesn't eliminate them necessarily.

Just before sunset, put your foster mother into the bales with some food, and leg-rope her right leg. This will make it difficult for her to kick the calf, because the rope will prevent her kicking forward. Take the calf to the leg-roped side and let him suckle. Leave him for four to ten minutes; his first feed should be small to avoid stomach upsets. Talk to your cow while the calf suckles. Tell her what a good girl she is if she's standing quietly, or reassure her if she's nervous. If she kicks, don't punish her, just gently admonish her so she knows you don't approve. If she is badly upset, don't worry if the calf succeeds in getting a little milk. Her behaviour will improve as she gets used to the routine.

Now tie up the calf out of reach (you may have to pull him off the teat) and milk the cow out, unless she already has a calf on her. If she already has a calf, you would have made sure she has plenty of milk before buying a second calf for her. Let the cow out and take the calf back to his enclosure. If the cow has been reasonably well-behaved, reward her with a woofle (mouthful) of hay.

Next morning repeat the procedure, but let the calf suckle longer, say 15 minutes. By the evening feed the cow should be starting to get used to her new calf. When she no longer kicks him in the bales when she's finished her food, it's time to put the two of them together in a small paddock. If she has her own calf, he should be put with them too, but your other stock should be kept out.

The best time to put cow and foster calf together is after the morning feed. He will probably go to sleep for a few hours while she grazes. Maybe around midday he'll feel peckish and try for a drink. She may or may not let him. If you see her standing for him to suckle, she's accepted him and you no longer need to put her in the bales for the calf.

You'll have to keep putting her in the bales until she accepts him. Then put them both back in their paddock. If the paddock is small or has little grass, you can let her out at night and only put her with the calf during the day.

Once the cow has accepted him and he's a few weeks old, you can probably put them with your other stock, depending on the nature of your other animals. Horses or donkeys (especially males) can sometimes be dangerous to calves, chasing them unmercifully. A cow will usually protect her real calf. She doesn't feel the same responsibility towards a foster calf so you will have to keep an eye on things till the calf settles in.

Young calves sleep a lot, and can get left behind. If the calf is the cow's own, she will come back to it. She will not take the same care with a foster calf. A deserted foster calf will usually announce its predicament loudly and mournfully to the world. This allows you to find him and take him to his foster mother.

Another possible problem is scours (diarrhoea) which can kill the calf through dehydration. Watch him when he relieves himself. If his manure is very liquid, whitish, or blood-stained, he's scouring.

My trusted scours cure is: warm about 350 ml water to blood heat. Add to it the juice of two cloves of garlic. To obtain the juice, crush the cloves into a piece of cloth. Squeeze the juice through the cloth into the warm water. Put the water into a bottle.

Now comes the interesting part. Stand astride your calf, with his tail against a wall so he can't wriggle free. Hold his head up with one hand and insert a couple of fingers of this hand into his mouth to keep it slightly open. Now slowly pour the garlic water, a little at a time, down his throat. If you're careful, you'll get about half of it inside him. The rest will be on the outside of both of you. Let's hope you don't mind the smell of garlic! It is important to pour slowly otherwise the calf may choke. This remedy has always worked for me. Sometimes it is necessary to repeat it daily for two or three days, and perhaps again a week later.

A word about moving young calves. The easiest way I've found is to hold a lead rope attached to his collar and nudge him along from behind. If you try to drag him along with the rope, he will probably pull back with all his strength. Or he'll use the ultimate in passive resistance, and lie down.

By nudging him along from behind with your knees each side of his tail, you will save considerable energy and make a sit-down protest unlikely. As calves get older, say three to four weeks, they are more likely to proceed in sudden rushes ending with an abrupt stop if his rope runs out. You will reach your destination faster if you run with the calf while he's headed in the right direction (good exercise, too!). The collar and lead can help you steer the calf at least a little, to cut down on sudden stops.

Once the calf is used to being taken to certain places he will become easier to handle; animals accept a routine fairly quickly. Routines make for smooth animal handling. The only trouble is, if you break an established routine, your older animals will be indignant and let you know how improper your behaviour is! Young calves, however, will just be confused.

If your cow accepted the foster calf within a week, which is fairly common, you will raise your extra calf from then on with minimal effort. All you need is a watchful eye, which anyone with stock should develop anyway.

In six months time you can sell your calf for $70-$230, depending on his breed, condition and state of the market. If your foster-calf is a female, you may decide to keep her as a milker or breeder — it's a cheap way to build up your herd. Happy fostering!

The 12 Volt 1/4 HP washing machine

by Peter van der Wyk
Nimbin, New South Wales.

IF YOU live in a 12 volt household there is a definite advantage in having all 12 volt gear instead of the 240 volt version. In remote areas 12 volt solar power systems are the most, and often only, affordable option.

Unfortunately, up to date, the low voltage appliance range has been limited. The Rainbow Power Company hope to be able to fill some of these gaps soon. We only need inverters and petrol/diesel generators because of the lack of such things as low voltage kitchen appliances (juicer/blender, food processor), good hi-fi gear and washing machines. This means an unnecessarily complex power system, with greater expense and inefficiency.

I have written about converting the old 240 volt sewing machine into a 12 volt version (see Earth Garden 45 and the subsequent book *Energy Works).* I have also mentioned that the Rainbow Power Company has released a magnetic stereo turntable and was soon to release a high fidelity stereo amplifier that could be matched up with the turntable, 12 volt Compact Disk player and tape deck.

One area that has remained lacking, although I have suggested a number of make-shift alternatives in the past, is the laundry. I suggested in a previous article that a 12 volt washing machine was both a viable and preferable alternative. At the Rainbow Power Company we have since been inundated with phone calls from people asking us for one.

It is possible to buy a 12 volt motor, off the shelf, that has all the characteristics of a standard 240 volt washing machine motor, but the price ($350 retail!) still makes it an option not so easily attained by all the single parents and people raising families while on fixed and low incomes.

The cheaper (and more ethical) option is to recycle car generators to turn them into 12 volt washing machine motors. I know that car wreckers and auto-electricians sell them as scrap metal because the car industry has gone over to alternators instead of generators. If you ask at a wrecking yard about anything he can't sell, it seems to escalate in value. It seems to be a case of "Well, if you want it, so do I".

They've done it again

Yes, folks, it has happened! We (the Rainbow Power Company) have started manufacturing washing machine conversion kits (from 240 volt to 12 volt). Instead of spending over $1000 to buy a diesel/petrol generator or an inverter, you need only spend $150 on a washing machine conversion kit. Not only does the 12 volt replacement motor use less than half the electrical power of its 240 volt equivalent but it also has more torque (mechanical power). This is another demonstration of the fact that low voltage systems are generally more efficient than their 240 volt equivalents.

But we may need your assistance in providing suitable generators at an affordable price. The generators we are using are Bosch C39 and C40. The price that we wish to maintain is around $5 per unit (including delivery to us). We then need to strip them right down for a total electrical rewind and replace such things as bearings and brushes.

By the time we have finished with the generator, it has not only been rewound but totally overhauled and reconditioned to give a long and reliable service. Parts and workmanship are guaranteed for six months. Each motor has been run for ten minutes after reassembly to let the new brushes 'wear-in' and energy consumption stabilise.

Fitting motor to appliance

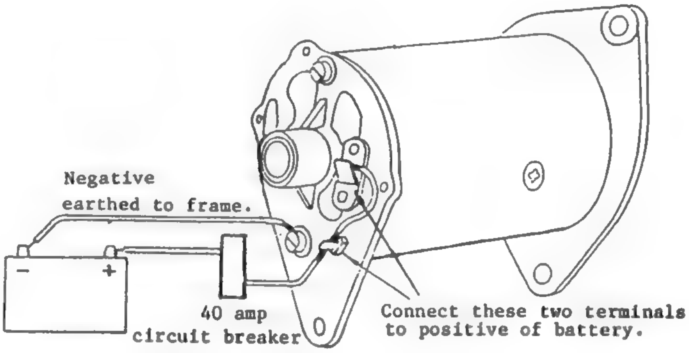
The remaining problem is that of fitting out your washing machine with the conversion kit. It would have been nice if we could have provided a single universal mounting bracket with the motor, but there are as many different variations of mounting a motor in a washing machine as there are models and brands of washing machine.

Note: It may be a problem to convert an automatic or semi-automatic washing machine to 12 volts and still maintain the automatic function. You may replace the 240 volt pump(s) with a 12 volt pump(s) for both filling and emptying the machine, but it may be preferable to save power and let gravity take care of either or both functions.

The 12 volt motor is primarily for washing machines but it has many other possible applications: anything else that may require a motor of this size.

Important

1.**Use heavy duty electric cable**. We must emphasise the importance of using a large enough electric cable to cope with the power requirements of the motor. It is also recommended to keep the cable to a reasonably short run from the battery and to use good solid connections. For a distance of less than five metres, five mm^2 cable should suffice and ten mm^2 cable is suggested for a distance of up to ten metres. If the motor appears to be underpowered then you can suspect



undersized wire, poor contacts or battery failure as possible causes. It may also be that there is a mechanical fault or poor lubrication in the equipment being powered.

2.**Use circuit breaker for motor protection**. Use a 40 amp circuit breaker as supplied on the positive line (see diagram).

3.**Oil regularly**. Oil regularly through rear oil hole.

4.**Motor guarantee**. If the unit is misused or tampered with, or circuit breaker not used, the guarantee is void.

5.**Safety**. Please keep such things as hands and hair clear of the moving parts when the motor operating.

Motor characteristics

We have performed a series of tests to compare the performance of a standard 240 volt washing machine motor powered by an inverter to the performance of a 12 volt car generator modified to become a suitable 1/4 horsepower 12 volt motor. The 240 volt washing machine motor in this case was a 1/4 horsepower Betts induction motor driven by a 12 volt to 240 volt 800 watt Portavolt Inverter (with 1200 watt peak output). The 12 volt motor was driving a belt via a 58 mm diameter pulley and stalled once the torque (belt tension) reached nine kg whereas the 240 volt motor was overloaded at a torque of seven kg.

We have graphs illustrating that the 12 volt 1/4 horsepower motor has an overall efficiency twice that achieved by the 240 volt 1/4 horsepower motor (within the expected operating range). The 240 volt induction motor used here turned at 1450 RPM regardless of the power and load requirements (delivered mechanical power), the speed of this motor being mainly determined by the frequency of the AC current (50 Hertz in this case).

The 12 volt motor speed varied with load conditions. With the 240 volt motor the power consumption remained virtually constant up to 150 watts, regardless of load conditions. With the 12 volt motor the power consumption increases steadily up to 150 watts, but not as fast as the load requirements, reaching maximum efficiency as the load requirements approach 1/4 horsepower.

Independent power systems

- Rechargeable torches
- Hydro and wind power systems
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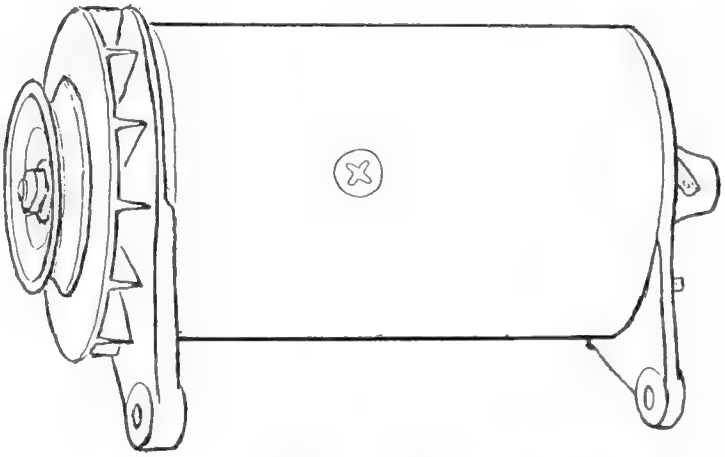

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Season by Season

by Jackie French

EVERY season has its own smell. You can smell growth now: warm soil, moist shoots, decomposing mulch. Later the garden will smell of ripe tomatoes, maturing corn, old beans on the compost heap. Now it smells of young things.

This is the time for main crop plantings. If you've got the room you can plant a year's supply of vegetables now: **carrots, beetroot, parsnips, celery, silver beet, chicory, leeks, spring onions, salsify, swedes, foliage turnips, tampala or Chinese spinach, turnips** — all of these can be planted in spring and if kept well fed and watered, harvested through to next spring. If necessary you could just feed on these without bothering with crops that need successions, like peas and beans or summer season crops like tomatoes, corn and pumpkins and zucchini.

There is a lot of mystique about planting successions of crops. Some books say plant corn and beans at three week intervals. Unfortunately crops grow faster in spring and autumn and slow down in heat and drought. You are still likely to get gluts and lean times. I plant a new lot of beans as soon as the first lot are flowering, and plant more corn just when the the tops start turning feathery. As I always plant at least twice as thickly as the recommended rate my plants vary in the time they take to mature. Even lettuce can be 'held' this way without turning bitter, which most lettuce do if they are checked at all; just plant them thickly and don't thin them out. The most vigorous will heart first, and the others start moving only when the the crop has been thinned as you start to harvest.

Remember, though — for this to work the soil must be humus-rich and fertile, and you need to keep up the mulch for a constant supply of slowly decomposing nutrients.

I usually stick in another lot of cucumbers and zucchini in December in case early plantings are hit by powdery mildew. Plant them well away from the first lot, with a tall crop like corn in between if you can. **Tomato cuttings** can also be taken now — just lay a branch longways in rich soil, then stake the tip upright later. Tomatoes should only take a week or two to root. Alternatively bury a tomato branch while it is still on the bush, and dig it up after it has rooted.

This is also the time to start putting out fruit fly traps and repellents. Check citrus too and loquats and other early fruit for signs of infection. Check codlin moth lures too: a jar of sweet port hung in the warmest spot in your garden. If you catch a codlin moth start spraying.

Band trees with hessian for oriental fruit moth and codlin moth larvae and inspect every two days

If you plan to plant **brassicas** like cabbages and caulies in January plant **clover** now to be a companion crop. Keep the clover mown close and dig a narrow path to plant the seedlings, then let the clover grow and flower when they are finger high to help protect against **cabbage white butterfly caterpillars.**

If **aphids or bean fly** — or any sap suckers — attack your early beans don't give up. Try a later crop. This will be tougher and less susceptible to pests, there will be more predators in the hot weather. Make sure your garden is compost fed or enriched with wood ash for **potash deficiency** — potash deficient beans are more prone to sap suckers. Beans that have been fed with a high nitrogen fertiliser like hen manure or urine will be wonderful bean fly attracters.

Grasshoppers may be a problem now as green grass dries off and they move onto your crops. Try catching them in a pan of molasses and water, with a bit of oil on top so they can't struggle out, or a circle of yellow plastic floating in water with a bit of oil added so they can't escape. A fine water spray barrier (try microjets or a perforated hose) will keep them from valued crops. Or just go out in the cool of the morning and catch them while they're sluggish, (this is my father's favourite method — he says it helps him prepare for the business day ahead) or import chooks. Larkspurs and rhubarb are supposed to be good barriers to grasshoppers. I've never found them any use.

Readers' requests

Robyn, from Bairnsdale in Victoria, wants to know if she can plant a banana to grow a banana tree. The answer is no — not an ordinary commercial banana, anyway. These are too domesticated, and the seed in the fruit isn't viable, though some varieties of wild bananas do produce viable seed and the fruit can be planted. Domestic bananas grow from suckers — you will need to find a friend with a banana tree or buy one.

Keith Hughes of Canberra wanted to know how to control Rattus fuscipes without hurting them.

Bush rats

The common bush rat is *Rattus fuscipes*., with dense soft grey brown fur, darker on top than below with a grey brown or black tail, slightly shorter than the head and body. The ears are big, round and stick up — pink grey or brown.

The bush rat is common over most of east coast Australia and southern western Australia, though not often seen in suburban areas except on the edge of bushland. They like thick ground cover — heavy undergrowth anywhere from sub-alpine areas to coast to fringe rainforest. Bush rats seem to be most common in forest gullies with damp fallen logs for shelter.

Bush rats seem to prefer insects but eats plant food and most other things if there is a food shortage, and will eat a bait of rolled oats and peanut butter in traps. The bush rat reproduces throughout the year up to about five litters and may start to breed at about four months old. They dig small burrows about two to three metres long, usually in rocky areas or in undergrowth, or shelter in fallen hollow logs.

You are unlikely to find bush rats inside unless you have damp forests or forest-like garden around you. We have bush rats occasionally inside here as do friends in other forest areas but if they do invade suburban homes they don't seem to have been identified as bush rats yet.

Because of colour variations it is difficult for the amateur to tell bush rats from introduced rats at a glance. Bush rat droppings are the same colour as introduced rats, dark brown or black when fresh, musky smelling, and paler brown when dry. They do contain particles of insects and plant material, however, that the droppings from introduced rats probably won't have — though in similar situations the diets of both may be similar. Introduced rats are more likely to have bits of cereal in their droppings but bush rats will also eat cereal. (Around here they seem particularly fond of apricot kernels and will grind the seeds on rocks till they open. They also like chook food).

Introduced rats leave bigger tracks than native rats, and have bigger feet: not much use unless you have the two to compare. I think they look sweeter, fluffier and less rodent-like, but I may be prejudiced.

Live traps

If you don't want to kill your rodents, for example, if you suspect they may be native species or you simply don't like killing, the following trap is easy to set up. Take a large bucket or drum, the deeper the better. Place it under a bench or table. Put a ruler on the bench, so that half of it is on the bench and half over the bucket. Now put the bait on the suspended end of the ruler.

The rodents run out to the bait and fall in the bucket. This trap can also be used to drown rodents: just half fill it with water. (This is a slower and crueller death than conventional traps).

Prevention

This is the only sure proof against rodent invasion. Clean up all areas around the house that may provide nesting sites: brush, long grass, especially by fences. Paved areas around the house deter rodents from crossing. Vermin proof all food containers outside. Make sure your house is rodent proof so that they can't get under the eaves, that windows are all screened, that doors fit well. You can buy rubber bits to stick on the bottom if they are too high. Rats and mice can squeeze through unbelievably tiny places. I once left a parmesan cheese container with a perforated lid in the bench. Two days later it was empty except for mice droppings. The openings were about the same size as apple seeds. A mouse can get through a one cm hole. A rat can squeeze through an opening as high as the width of your finger. Tough fly screen is the best answer.

Install metal shields on all pipes leading into the house or up to the roof. Cover any area that might be gnawed through to effect an entry with metal sheeting. Check all holes into the house. Timber floors aren't vermin proof — if you are designing a house or shed try to have concrete floors wherever food will be kept, or use a tough floor covering well sealed at the edges.

Deterrents

Once rodents are inside the house **fresh or dried mint leaves, lavender, white helebore or camphor or moth balls** may repel them. They may at least keep them from your more valuable possessions like papers. But remember: once they are inside they have to eat something, and no deterrent will keep them from a favoured food stuff, especially if there is nothing else handy.

Predators

Rodent predators include owls and many other birds, including kookaburras, hawks and other birds of prey, reptiles, foxes, cats, dogs. Open areas around houses, sheds and fences will help them catch their prey by making them more visible.

Some sorts of dogs, especially terriers, and cats will catch rodents. They will also catch rodent predators and keep birds from the garden.

(Condensed from Organic Household Pest Control by Jackie French; Aird Books, around $13.95).

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EARTH GARDEN REVIEWS

Edited by Sophie Masson

Yuendumu Doors — Kuruwarri, by Warlukurlangu Artists, Australian Institute of Aboriginal Studies, GPO Box 533, Canberra, rrp $22.95 soft cover.

THIS is a beautiful book from Australia's top publisher on Aboriginal issues. It's written in English and in Walpiri, the language of the artists in this book (north west of Alice Springs). It's a record of a most unusual project: teaching the children Dreaming stories and Aboriginal law by painting intricate Dreaming stories and maps on classroom and other school doors at Yuendumu.

Children as well as adults worked on the paintings, and each one is reproduced, accompanied by explanations and verbal mappings of each painting by the artists themselves.

The result is an astonishing exploration of Walpiri life and spirituality, deeply complex and richly layered, yet also magnificently austere and simple. The paintings use Earth colours — ochres, red-browns, blacks, whites, crimsons, pale pinks — in a wonderful swirl of dots and layers of meaning. The aesthetic effect is rich and jewelled, yet never 'busy'. However, it's never just aesthetic. In Walpiri society art and the artist are never separated from a harmonised life, the life of the people, who all participated in this work. The paintings and the accompanying stories do much more than translate an individual artist's impression of landscape — they are the vision of a people, a deeply spiritural yet earthy vision of a whole life order.

The cover photograph incorporates Paddy Japaljarri Stewart's recreation of the Yam and Bush Tomato Dreaming — an important story in the context of Walipiri life.

Plants and People, Aboriginal uses of plants on Groote Eylandt, by Dulcie Levitt, Aboriginal Studies Press, AIAS, Canberra, $19.95 soft cover.

THE use of plants and herbs by Aboriginal people on Groote Eylandt (Northern Territory) is covered in this fascinating book. The first section deals with background information: life on Groote Eylandt, its history, economic life, weapons, food, and a variety of other topics. Then there's a section called 'The Bush Calendar',which shows when plants come into use. Other chapters are on food, weapons and the processing and collecting of food. There is some very interesting information in this, such as the fact that babies, from the age of six weeks, were given honey and water as a supplement to breast feeding, and from the age of five or six months were given a 'baby cereal' made from grinding roots of native plants. Children were not given any meat until they had their teeth, although they were given soft boiled fish, snails, crabs and witchetty grubs.

There's also an interesting chapter on sickness, and how it was treated. For example, crushed green tree ants, along with their nest, were put to soak in a coolamon and the resulting liquid drunk by people suffering from headache (the nest was also put on the forehead). Another remedy, this time for coughs, was to drink the liquid in which white paperback leaves had been put to soak. Recommended for those of us interested in Aboriginal food, agriculture and medicine.

Just for Living, Aboriginal perceptions of housing in northwest Australia, by Helen Ross, Aboriginal Studies Press, $19.95 soft cover.

ADEQUATE housing is one of the greatest of problems bedevilling Aboriginal communities.

If 'conventional' houses are built for Aboriginal communities, the people often suffer from the expectations put on them by suspicious or jealous white people. Recently someone made the remark to me that the local council was 'wasting money' building large houses for Aboriginal people. "Why should they get such big houses?" it was jealously asserted. "They only wreck them anyway!" The reality for many Aboriginal families is that several generations live in the one house (a way of life that was common to most communities all over the world, including western nations, until the advent of the Industrial Revolution. Why should such a way of life be regarded as inferior, when, for example, Aboriginal elders enjoy the respect and dignity accorded to their age, while old white people are often shoved away out of sight in nursing homes?).

In areas such as the Kimberleys of Western Australia, which is where this book focuses, housing has often been shockingly inadequate. Aboriginal people were simply regarded as servants by the cattle stations, and their housing was a reflection of this low status. This persists today — my husband David has observed bark and tin 'humpies', the only so-called 'housing' provided for Aboriginal workers, while white stockmen, although not getting luxury accommodation by any stretch, at least got a solid house!

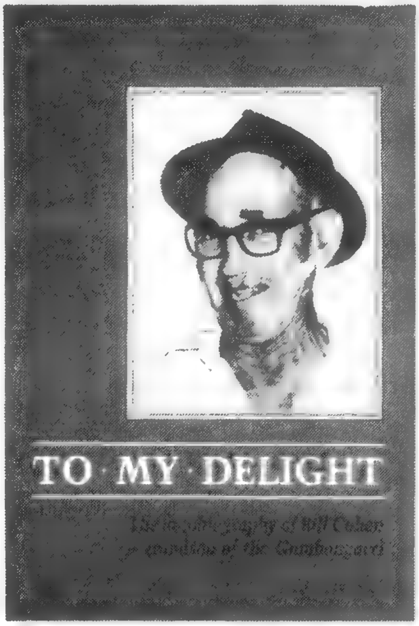
But what do Aboriginal people themselves want in the way of housing? Most people studied in this book wanted water, showers and toilets, with many wanting electricity as well. Space in houses was also seen as important, as only 17 percent of the families surveyed lived in nuclear families — most lived in extended families. Design features were also commented on, with most people looking for features that promoted coolness (not surprising!).

Inside Black Australia, an anthology of Aboriginal poetry, edited by Kevin Gilbert, Penguin Books, $12.95 paperback.

IN HIS introduction to this anthology, writer Kevin Gilbert says " . . . these poems then are not poems of protest, but, rather, poems of life, of reality. The poetry of a people concerned with life and loving and dignity and justice, birth, regeneration, and children and the land, and they are saying how, where and why. *Why* has it gone so wrong?"

This grief-stricken, angry, passionate question resounds throughout the poems in this powerful collection. The poems are not, as Kevin Gilbert says, odes to a 'sunburnt country' or obscure surrealism so popular in poetry these days: they are direct, they speak from the heart, from the mind, from the soul. They are moving — I found myself crying at many of them - strong, vivid and they tell the story of Aboriginal people a thousand times better than any treatise could. These are also poems that sing with the joy of life, of families, children, lovers, the love and belonging of the land.

To My Delight, by Bill Cohen, Aboriginal Studies Press, AIAS, Canberra, rrp $12.95 soft cover.



ABORIGINAL people are telling their own story now, much more than ever before. No more is their history and culture left as fields of conquest for white academics. Today ordinary people are telling their own stories, with inimitable style and verve. To many other Australians, these stories are a revelation, of what life was like, and is still like, for black Australians.

Banish instantly any preconceptions you may have of downtrodden passive victims — people like Bill Cohen are strong, dignified, very much their own man. Bill, who is now dead, was a grandson of the Gumbungarri, a tribe that inhabits the Northern Tablelands of New South Wales. He was initiated at an early age by his father, who was an elder of the tribe, and his life has been a chequered, varied one.

Throughout the book, what shines through is Bill's immense zest for life, his pride in his Aboriginality, and his strong family feelings.

Countrymen, the life histories of four Aboriginal men, as told to Bruce Shaw, Aboriginal Studies Press, AIAS, Canberra, rrp $15.95.

THESE are the stories of men from the east Kimberleys who grew up together. They are Mandi, Banggaldun, Bulla and Jeff. These

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•continued from page 49

Clive Worsell of Proserpine in Queensland wants information on growing cashews, coffee, carob and organic sprays and deterrents. At the risk of self advertising, *Organic Garden Doctor*, which should be out by Christmas, covers pest control. My book *Guide To Biological Pest Control*, which will be out early next year (published by Aird Books, Melbourne), goes into it in much more detail, with deterrents and designs for problem-free gardens and orchards.

Earth Garden will be selling another book of mine next year on self sufficiency. It gives information on growing and processing coffee and carob and cashews as well as staples like wheat and oats, tea, rubber plants, home grown baby powder and soaps, oils, perfumes, medicinal plants, a range of condiments and spices, edible weeds and flowers, home grown beers, unusual fruit and veg for a year round supply — hopefully most of the things 'self sufficiency ' books usually leave out.

Next issue: an organic pest control calendar for 1989 — a month by month guide to what pests are likely, how to prevent them and how to control them.

**Unfortunately, space limitations, due to our special theme issue this month, have meant we have had to hold over until next issue an article by Jackie on 'growing your own pesticides'.*

—Alan & Camille.

Get ready for the ConFest!

by Charles MacFarland

Glenhaven, New South Wales.

ONE of the best things in my life over the past few years has been the series of ConFests held by Down to Earth Victoria at various sites. This year another ConFest is to be held over the New Year's weekend, and I feel sure that many readers of Earth Garden would enjoy going.

The word ConFest is an amalgam of Conference and Festival. A ConFest is a gathering of people interested in aspects of the counter-culture such as alternative healing, spiritual pursuits, New Age music, communities, conservation, living on the land, meditation, alternative energy and building, and many others.

A ConFest is above all a chance to meet and talk with people who share your interests and to attend conferences given by experts. And to relax and enjoy sharing, music, good food, swimming and the great Australian bush.

This year the ConFest will be held on a 100 acre reserve not far from Walwa, Victoria, on December 29, 1988 to January 2, 1989. Walwa is on the Murray River about 70 km upstream from Albury/Wodonga.

When you arrive at ConFest, what can you expect to find? First of all, at the Information Centre there will be a noticeboard with dozens of workshops put on by individuals and groups. Last year's ConFest at Broadford had workshops on Oki-Do Yoga, massage, deep ecology, living in tipis, rebirthing, folk dancing, juggling, building your own mudbrick home and many others.

These seminars are given free and they can be put on by anyone who has knowledge in a field and feels others could benefit from it. If you feel like leading a group or starting a discussion, you are welcome to add your notice to the board.

Besides workshops, you can expect to find many friends and interesting people to talk to. Not everyone goes to the workshops and there is plenty to do besides. Impromptu music sessions are frequent and some professional groups perform in the evening.

The Murray River curls around the ConFest site on two sides, so there are plenty of inviting spots for swimming. Mud saunas and mud sunbaking are also popular.

The site also has plenty of grassy areas and shady trees for camping. ConFest people generally bring their own tents or come in camper-vans. Down to Earth provides showers, pit toilets, campfire and cooking areas, drinking water tanks and marquees for the conferences.

Vegetarian food of many different and delicious kinds will be available at the marketplace. You need to bring your own cup, plate and utensils, as disposables are not permitted at ConFest. (Incidentally, pets are also not permitted). Many craft goods and things like crystals, books and conservation products will also be available at the market throughout the ConFest.

The cost of the ConFest is $45 at the gate for the whole five days. Same price if you only stay for one or two days — but you won't want to leave. Early bird tickets are available for $30 (cheques only) until Friday, December 9, from Down to Earth at Post Office Box 1234, North Richmond, Victoria, 3121. Maps to the site and other information can be obtained via the same address.

So if you're looking for a friendly atmosphere, interesting discussions, good food, and lots of happiness over your New Year's this year — and who isn't? — come to ConFest 89.

EARTH GARDEN UNCLASSIFIEDS

Unclassifieds are 24 cents per word, prepaid. The deadline for the next issue is 21 November.

HOME STONE FLOUR MILLS. Mill your own stoneground wholemeal flour for cakes and bread at home with a Retsel Little Ark Stone Flour Mill. "Endorsed by the Housewives' Association". Write for catalogues to: Retsel Distributors, PO Box 712, Dandenong, 3175, enclosing three postage stamps, or telephone (03) 795 2725. Distributor inquiries welcome.

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OUTLOOK ALTERNATIVES have moved to 52 Faithfull Street in Wangaratta. Outlook Alternatives specialise in central heating, solar hot water, solar electricity, wood-fired heaters, and energy-efficient house design. Phone (057) 21 9900.

LA MANCHA RECIPES. 70 low-fat easily prepared vegetarian recipes. 42 pages. Send $4 to La Mancha Health Centre, Wollongbar, 2480.

THE EMERALD CIRCLE MONTHLY NEWSLETTER is full of interesting topics for Healers, Psychics, Herbalists, etc. Details from Post Office Box 800, Noosa Heads, 4567.

GOUT CONTROLLED. Four hundred year old recipe that works. Send $2 and SAE to Paula Mann, 7 Myrtle Street, Milton, NSW, 2538.

ADOBE WORKSHOPS by EARTHLY DESIGNS Saturday November 26, 9:30 am — 3:00 pm. $20 per person includes lunch and morning tea. Aspects covered, which will enable you to build your own house of earth, will include soil suitability, making and laying bricks, tools, house design and construction and water tanks (stabilised bricks & ferro-cement). Adobe house with adobe floor on site. Directions provided on enrolment.

Overnight campers welcome. Graham Pill, The Old Coach Road, Kendall, NSW, 2439, (50 km north of Taree). Phone (065) 594 341. Earthly Designs also provides a drafting service and individual consultancy.

WANTED. Advice and/or share interest in setting up a printing press using recycled and/or home-made paper, non-toxic inks and dyes, etc. Also looking to buy secondhand equipment. All correspondence will be answered. Paddie Cowburn, Neutral Junction, via Alice Springs, NT, 0872.

PINE TREES (800) investment sale. 1982 planting on Kangaroo Island by reputable company. First thinnings return in near future. Phone (054) 721563.

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LAND LINES

LAND LINES are for people buying, selling, seeking or sharing houses and land. It is your responsibility to check all deals. We charge a rate of 24 cents per word (prepaid) for a listing of any desired length, plus $20 for a professionally-drawn illustration to go with your ad, taken from any old tatty photo you care to send us. All LAND LINES must include your name and address (phone number is optional). LAND LINES for the October issue should arrive (at PO Box 188 Moreland, 3058) by 21 November.

TUMBARUMBA 295 ACRES $60,000: Located about 8 km from the southern NSW town. Heavily timbered with some clear areas, springs, a small dam and abundant wildlife. Panoramic views of the Snowy Mountains possible with some clearing. Phone Ian (069) 251721.

THE LILLIFIELD COMMUNITY has 330 acres of beautiful land in the hills between Lismore and Murwillumbah. It's about 15 minutes from Nimbin and an hour from the coast and is fully approved by the local Council. Overall, the land is owned by an incorporated company but each member has shares which give entitlement to about 4 acres for private use. In addition, members share in over 100 acres of common land which is available to all for recreation, forestry, agriculture, etc as well as having the use of the community Meeting House, the tractor and other equipment. The Daystar Rudolf Steiner School is located on adjoining land. The basic framework of roads and dams has been completed and our membership has been substantially established. Now we are looking for about ten more families to take us into the final stage of our developing community. People who will respect this beautiful land as well as each other. The share price of $15,300 per household entitles you to all community facilities as well as to possession of your chosen 4 acre site. If this appeals to you please write to: "Lillifield", Lillian Rock, 2474, or telephone (066) 897 224 or 897 323.

CRYSTAL WATERS, PERMACULTURE VILLAGE, MALENY, QUEENSLAND. 640 acres. Half share available ($7,000) in one acre house block facing north, superb view, for happy, positive lady over 35 who likes children. Write to Dennis, Box 139, Noosa Heads, 4567 or phone (071) 853 242.

COOYAR, QUEENSLAND, 90 km north Toowoomba. Two bedroom timber cottage fully renovated inside and out, wood stove and hot water. Power and phone. Five acres. Bitumen road frontage. One km shops, post office, school and hotel. Large vegie plot part covered, fruit trees, plenty water (bore). Cowyard/shed, wood shed, chook house, good fencing. Annual rates $140. The property is already operating towards self sufficiency. Price is $45,000. Please write to Trevor and Val Read, Post Office, Cooyar, 4402 or telephone (076) 926 260.

WANTED TO BUY, WARREGO RANGES. There has to be someone with 10 acres with a small run down shelter on it in the mid-north ranges, for example the Warrego Ranges, for sale. Price range $12,000. I do not wish to go for a real-estate sale. So I'll sign off. Please drop a message back if you feel you can guide myself, my wife and five daughters in anyway. Sincerely Bruce, Lorna and girls. 38 Queen Street, Berry, NSW, 2535.

ST LAWRENCE, CENTRAL QUEENSLAND. Double storey Queenslander home on half an acre. Three bedrooms, sleepout, front verandahs, combustion stove, ceiling fans, lock-up garage, double shed. School, post office, stores, pub, railway. Fronts Tidal River, abundant fishing, crabbing. $32,000. Phone N Barrett, (079) 562 542.

BUNDABERG, QUEENSLAND. Timber home, solid high-set 3 bedroom and very large sunroom on small block. 35 km south of Bundaberg, beaut canefield country views and quiet and relaxing. Just out of town. Phone Frank Lalchere (071) 261 624, Monday to Friday, 4 am to 11 pm or write to Box 225, Post Office, Childers, 4660.

OGUNBIL, NEW SOUTH WALES. Five acres, arable land, some large trees, partly fenced, quiet valley, good outlook, lovely countryside. Phone and electricity and building permit available, mudbrick okay. Half an hour from Tamworth. $20,000 ONO. Phone after hours (02) 620 1483 or write to S Moss, Lot 19 Wallgrove Road, Horsley Park, NSW, 2164.

KEMPSEY, NEW SOUTH WALES. 21&1/2 acres of secluded hilly bush. 25 km west of Kempsey. Three quarters fenced. Phone, power available. Rain and dam water only. Good house sites. Good positions for dams. Permission to build with no restrictions. 3 km to small town. $16,000 ONO. Ph Roger (062) 416 767.

ONE HOUR EAST OF MELBOURNE. Home and income. Three bedroom home plus large 2 roomed old settlers cottage. Five chestnut trees also many other fruit trees. 2&1/2 acres picturesque park with permanent mountain stream. Got to be seen. Has been used as a health retreat. But suitable for other purposes. Just over one hour east of Melbourne. Present owner would like to retire. Price $120,000 negotiable. Ring and call for inspection on (059) 667 296.

RAINFOREST SETTING NEAR MILLAA MILLAA, NORTH QUEENSLAND. 230 acres, 25 shares (all sold). Three shares available $8,000 each, independent freehold title. Family withdrawal forces sale. Permanent stream through the land, wild river for three quarter mile along boundary. The land is 60 percent rainforest, balance old clearings. No clearing in past 50 years. National park and State forests adjoin (World Heritage nominated). Four established houses plus forest meditation huts. For further details write to Mr Jack McKinnon, "Rainforest", Post Office Box 90, Nimbin, NSW, 2480.

NIMBIN, NEW SOUTH WALES. Two acre share in Blue Springs. An established multiple occupancy, fully legal with separate titles. Gravity fed spring water. Removable dwelling and small water tank. Includes stand of flooded gums. Backing onto Blue Knob with view of Nimbin Valley. $13,000. Phone Justin Dunham on (07) 277 1760 or (07) 369 8038 AH.

33.8 ACRES, MOUNT FOX AREA, FAR NORTH QUEENSLAND. 60 km west of Ingham on top of the Range. Bitumen road up the range. Power and phone available. Undulating valley, open woodland with undergrowth in places. Rainforest area along the creek, small spring also on property Small school at Mount Fox. Shops at bottom of Range. $45,000. Phone (070) 953 179 or write to John Bowen, C/- Post Office, Yungaburra, 4872.

YOUNG COUPLE (32/37) from Czechoslovakia (no kids, no pets, no car). Want small house/shed for low rent in Rainbow area, close to town (up to 3 to 4 miles), quiet place, privacy, access to fresh water. Please write to Jiri & Zdena Cernega, 4 Alfred Road, North Fremantle, WA, 6159.

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NORTHERN NEW SOUTH WALES. Four bedroom house on five acres. Freehold land. Large dam, chook pens. Land suitable for market gardens, grazing animals, etc. Bitumen road frontage, electricity, phone, school bus at the end of the road. Six minutes to town, 15 minutes to beach. Phone Cathy Jonas (066) 822 585, $69,500.

RETREAT LAND WANTED — NORTH COAST NSW. Reasonable access, totally secluded, comprising some acres of easy care scenic country, north coast NSW preferred. I have commitments in the city except for three months every year. During this time I need to be very quiet and spiritual. The ideal would be an M/O of like-minded people and/or good neighbours to tolerate reclusiveness when I am there and keep an eye on the place when I'm not. If you can help, please write. Also people with similar needs, please communicate; we might be able to help each other. P O'Brien, PO Box 110, Brooklyn, NSW, 2253.

APOLLO BAY, VIC. 11&1/2 acres, 3 km from beach, 5 km from town. View of Wild Dog Valley, permanent spring water to house site, planning permit, 600 trees planted, some fruit trees, fully fenced, creek runs through property. SEC available, school bus past gate. $45,000. Tina and Alan Moore, (052) 376213.

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•continued from page 51

men told the story of their lives to researcher and author Bruce Shaw, and the result is very vivid, direct stories, like listening to a friend talking. The book's divided into three sections — The Early Days, Law, and Today, with each man contributing in turn.

Traditional and modern, Dreaming and working on cattle stations, are all part of these men's lives, in a harmony more complex than any most people have to cope with. And despite the fact that some have had hard lives, with lots of unthinking, stupid, brutal prejudice thrown their way, the men are philosophical, thoughtful, and hopeful for the future. As Bulla says in the book, "Very few blackfellers can choose what they want to do with their future, but I think they do have more choices. . ." As elderly men, and respected in their community, the hand of friendship they extend towards the white community is a generous one, one that for all our sakes needs to be reciprocated.

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THIS is a wonderful book, the sort of book that only appears occasionally. It is the environmental life testament of an elder of an Arnhem Land tribe, Big Bill Neidje. His words have been likened to the equally moving statement on the environment of the American Indian Chief Seattle, in 1853 (which was published in Earth Garden 54). In this book, Bill speaks in simple, profound terms of the meaning of life, the interdependence of life according to Aboriginal wisdom. Wisdom we ignore at our peril.

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EG11: Water — hydraulic ram . . . waterwheels . . . okra . . . seed primer . . . heavy horses . . . tomatoes . . . soft technology . . . wine . . . hard cheese . . . start with hens.

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EG21: Womancraft — all articles by women . . . earthly arts . . . axewomanship . . . glove puppets . . . spinning . . . weaving . . . easy rugs . . . Sumatran house . . . old roses . . . Index (EG10-20).

EG22-23: Australian Access Sourcebook . . . 150 pages . . . Aborigines . . . organic growing . . . permaculture . . . earth building . . . wind . . . solar . . . water power . . . technology . . . water supply . . . access to groups, plans, books, tools.

EG24: Place — 24 new settlers write . . . Mare Carter . . . Ron Edwards . . . Neil Douglas . . . Gundaroo Store . . . Rainbow Region . . . Mt Oak . . . Moora Moora . . . Universal Brotherhood . . . bush ashram.

EG25: Australian Access Sourcebook (Part 2) — 130 pages . . . livestock . . . aquaculture . . . fencing . . . killing . . . tanning . . . food and nutrition . . . grain grinders . . . solar homes . . . methane . . . greenhouse . . . Dorothy Hall.

EG26: The earth-built kasbahs . . . owner built homes in stone . . . timber . . . mudbricks . . . a slab cottage . . . tree felling . . . solar electrics . . . acorns . . . compost dunny . . . quandong . . . pumpkin recipes.

EG27: 100 tropical food plants for Australia (part 1) . . . 16 legumes . . . winged bean . . . pigeon pea . . . lablab . . . cowpea . . . adzuki bean . . . blacksmithing . . . bluestone building . . . wok cooking.

EG28: Tropical food plants (part 2) . . . horse and buggy . . . packhorsing the Alps . . . black sheep . . . Merinos . . . bullocks . . . tamarillo . . . stringybark baskets . . . solar trike . . . persimmons.

EG29: Mudbricks — the monastery at Stroud . . . Bob's bonza brickmaker . . . earth floors . . . curved walls . . . herb roof . . . cutting axe . . . low energy design . . . coconut mats . . . mangoes . . . tropical food plants (part 3).

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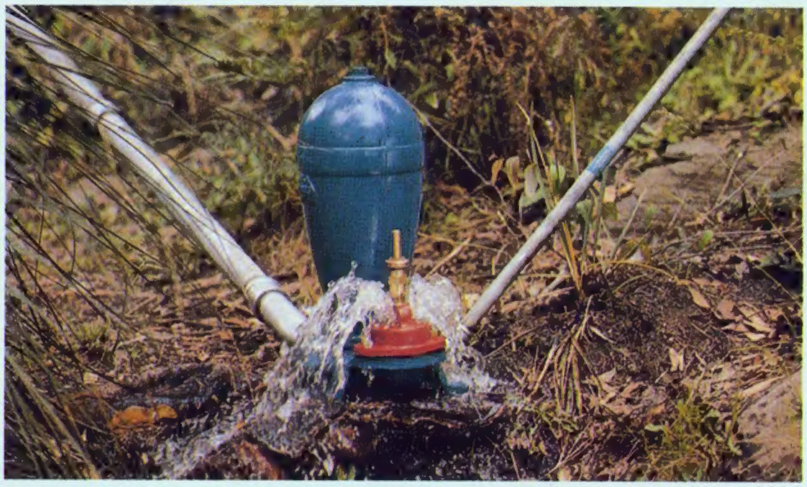

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